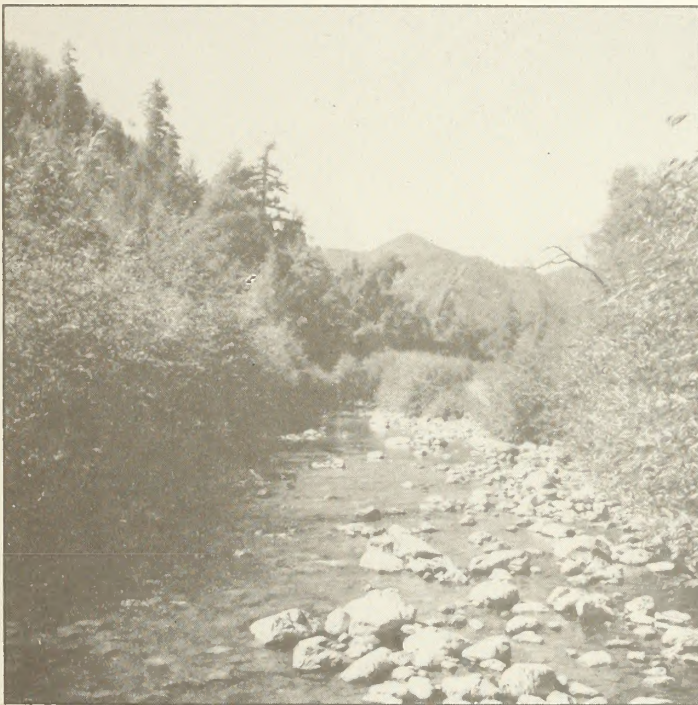
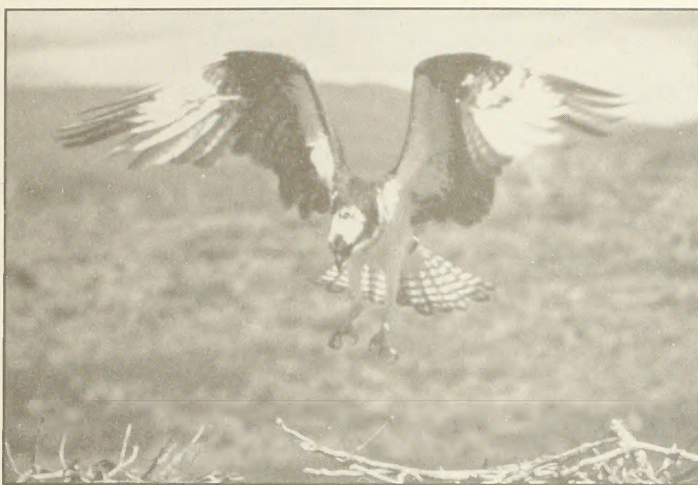




88064559

Managing the Nation's Public Lands



Fiscal Year 1988

HD
224
.L35
1988
C.2

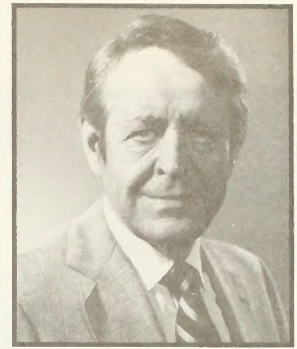
Managing the Nation's Public Lands

Fiscal Year 1988

This report to the Congress of the United States on the management of the Nation's public lands is submitted pursuant to requirements of the Federal Land Policy and Management Act of 1976 and covers the period from October 1, 1987, through September 30, 1988.



A Message from the Director . . .



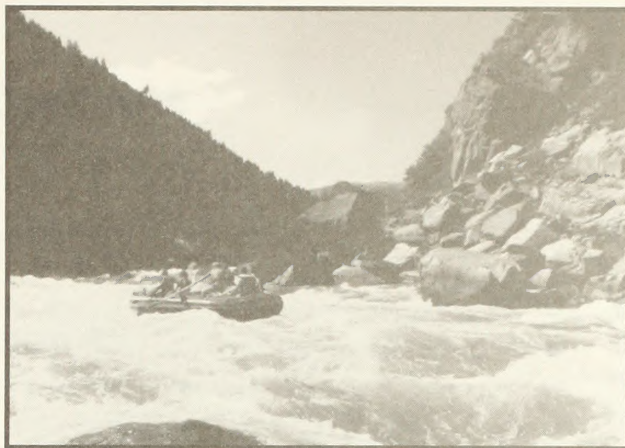
I am pleased to present this report on the accomplishments of the Bureau of Land Management for Fiscal Year 1988 — my last full year as Director of this agency.

This report covers the Fiscal Year ending Sept. 30, 1988. Since then, a number of auxiliary activities have evolved. It is important to bring you up-to-date on the following significant occurrences:

- *National Wildlife Federation Lawsuit (NWF)* — As discussed in the Renewable Resources chapter, the preliminary injunction granted to NWF in 1986 remained in effect during Fiscal Year 1988, affecting approximately 180 million acres of land and 10,000 lands and minerals actions on BLM public lands. However on November 4, 1988, Judge Pratt vacated the preliminary injunction and dismissed the case because the NWF lacked standing to file suit. On November 14, 1988, the NWF appealed Judge Pratt's order and asked that the preliminary injunction be reinstated pending appeal. On June 20, 1989, the Court of Appeals, District of Columbia Circuit, reversed Judge Pratt's decision saying the NWF affidavits were factually sufficient to support its standing. The preliminary injunction was NOT reinstated. The District Court was ordered to address NWF's claims and resolve the lawsuit. BLM is presently consulting with the U.S. Solicitor's Office and Department of Justice on the next course of action.
- *New Fire Policy* — Following the severe 1988 fire season, an interdepartmental Fire Policy Review Team was formed to examine fire policy nationwide for the Departments of Interior and Agriculture. The conclusion of the team, presented in December 1988, was that while the basic objectives of federal fire management policies are sound, the policies themselves need to be refined, strengthened, and reaffirmed. Pursuant to the direction of Secretaries Lujan and Yeutter, all of the affected agencies are currently evaluating their fire management plans in light of specific improvements recommended by the team. This evaluation will include public involvement or comment. Until these plans have been revised or reaffirmed, suppression action will be taken on all wildfires on public lands.
- *Desert Tortoise* — BLM administers 48 million acres of desert tortoise habitat, as described in the Renewable Resources chapter. This summer, the Natural Resources Defense Council, Environmental Defense Fund and the Defenders of Wildlife petitioned the Secretary of the Interior to use his emergency listing authority under Sec. 4 of the Endangered Species Act to list the Desert Tortoise. On July 31, 1989, the U.S. Fish and Wildlife Service emergency-listed the desert tortoise in the Mojave Desert, which is all wild tortoises north and west of the Colorado River in the states of California, Arizona, Utah and Nevada. The listing will be in effect for 240 days, during which time the Fish and Wildlife Service will proceed with a formal listing process for the species.

It is with a sense of accomplishment that I am turning over the directorship of the Bureau of Land Management to Cy Jamison. Although I will miss the challenge of multiple-use decisionmaking, I am pleased to leave the leadership of this agency to a high-caliber individual such as Cy. I am grateful to have had the opportunity to work with all the employees of the BLM, and all the other individuals and organizations who take an interest in our nation's natural resources. It is to all of you that I owe my successful tenure as BLM Director for the past 8 years.

Robert F. Burford



BLM MISSION STATEMENT

The Bureau of Land Management is responsible for the balanced management of the public lands and resources and their various values so that they are considered in a combination that will best serve the needs of the American people. Management is based upon the principles of multiple use and sustained yield — combination of uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources. These resources include recreation, range, timber, minerals, watershed, fish and wildlife, wilderness, and natural scenic, scientific and cultural values.

DEPARTMENT OF THE INTERIOR MISSION STATEMENT

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural and cultural resources. This includes fostering wise use of our land and water resources, protection of our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department also promotes the goals of the Take Pride in America campaign by encouraging stewardship and citizen responsibility for the public lands and promoting citizen participation in their care. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. Administration.

Table of Contents

Introduction	1
Historical Perspective	1
The Federal Land Policy and Management Act	1
America's Resources	2
Multiple-Use Management	2
Organizational Structure	3
Energy and Minerals Programs	4
Oil and Gas	4
Geothermal	5
Coal	7
Oil Shale	9
Solid Leasable Minerals	9
Mineral Material	10
Mining Law Administration	10
Hazardous Materials Management	11
Land Programs	12
Lands	12
Rights-of-Way	13
Withdrawals and Review	13
Alaska Lands	14
Cultural Resources	14
Wilderness Resources	15
Recreation	16
Renewable Resources Programs	17
Wildlife and Fisheries Habitat	17
Forestry	19
Wild Horses and Burros	20
Rangeland Resources	22
Soil, Water, and Air	23
Pest Control	23
Riparian Areas	24

Table of Contents

Support Services	25
Engineering Services	25
Planning	25
Fire	26
Aviation	27
Law Enforcement and Resource Protection	27
Cadastral Survey	28
Volunteers and Other Contributed Services	29
Information Resources	31
General Administration	34
Management and Productivity	34
Procurement	34
Property Management	35
Personnel Management	35
Financial Management	36
Appropriations and Expenditures	36
BLM Funding	36
Management of Lands and Resources	37
O& C Grant Lands	40
BLM Organizational Chart	42
Public Lands in the Western States	43
BLM State Office Directory	44

Introduction

Historical Perspective

In the last half of the 18th century and the first half of the 19th century, the United States Government acquired most of the land west of the Appalachian Mountains, eventually owning more than 1.5 billion acres of public domain -- lands that had never been in private ownership. Although the Federal Government has since titled most of this acreage to private citizens, industry, and State and local governments, some of the public domain lands were dedicated to establish the National Parks, National Forests, National Wildlife Refuges, military compounds, and other government facilities. However, approximately 270 million acres -- about one-eighth of the Nation -- remain today as public lands, which are managed by the Bureau of Land Management (BLM) for multiple uses. In addition, BLM also manages the mineral estate underlying another 300 million acres of lands administered or owned by other agencies or private interests. Most of this acreage is located in the western states, including Alaska, although small parcels are scattered across the eastern states.

In 1812, Congress established the General Land Office to administer the public domain, with the primary purpose of passing public domain lands into private ownership.

The passage of the Taylor Grazing Act in 1934 and establishment of the U.S. Grazing Service provided for active range management on the public domain, but this was seen as interim management of the lands pending their final disposal into nonfederal ownership.

In 1946, the Presidential Reorganization Plan No. 2 merged the Grazing Service with the General Land Office to create the Bureau of Land Management within the Department of the Interior. BLM became responsible for managing all the resources on the Nation's public domain lands; however, with more than 2,000 unrelated and often conflicting laws pertaining to the public domain, the agency had no unified legislative authority to manage those lands.

The Federal Land Policy and Management Act

When Congress enacted the Federal Land Policy and Management Act of 1976 (FLPMA), it established a coherent legislative mandate for managing the public lands and made BLM a true multiple-use agency. The law recognized that the public lands are a national asset, providing goods, services, and vast natural resources for millions of Americans:

. . . Congress declares that it is the policy of the United States that . . .

the public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archaeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; and that will provide for outdoor recreation and human occupancy and use . . .

the public lands be managed in a manner which recognizes the Nation's need for domestic sources of minerals, food, timber, and fiber from the public lands . . .
(FLPMA, Section 102[a][8] and 101[a][12])

America's Resources

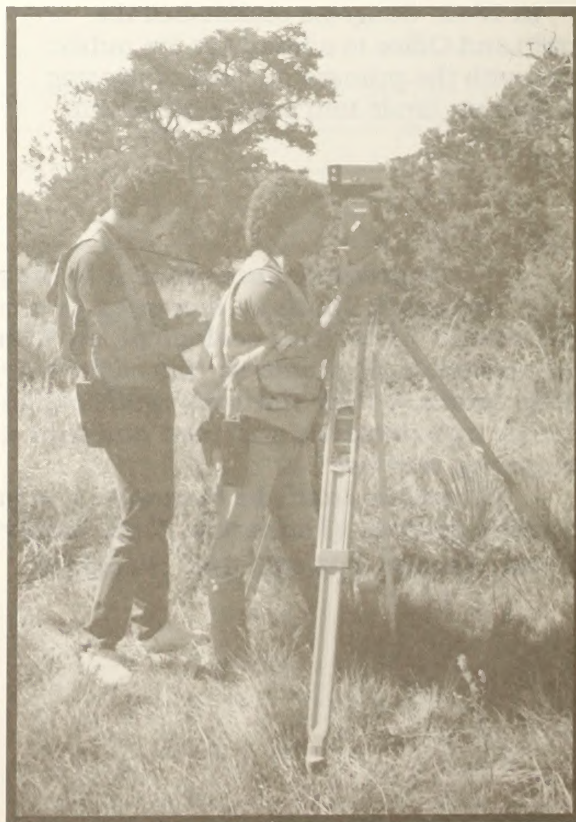
FLPMA provides a clear-cut policy that most public lands are to be retained in Federal ownership and managed by BLM under a concept of multiple use for all Americans, with the full participation of the public and a careful balancing of the interests of competing users. Today BLM manages a multitude of assets for the American public. They include:

- about 1.4 billion barrels of proven oil reserves;
- approximately 12.5 trillion cubic feet of proven natural gas reserves;
- 10 million animal-unit months of forage to support about 4.3 million head of domestic livestock;
- the major portion of the undiscovered but geologically predictable domestic deposits of aluminum, antimony, beryllium, bismuth, cadmium, chromium, cobalt, copper, fluor spar, lead, manganese, mercury, molybdenum, nickel, platinum group metals, silver, tungsten, and vanadium;
- almost 8 million acres of commercial forest land with a producing capacity of about 1.4 billion board feet each year;
- about 80 percent of the Nation's oil shale;
- more than 350 designated areas of critical environmental concern;
- all 11 of the Nation's major tar sand sites;
- thousands of unique recreational areas, including 32 Wild and Scenic Rivers, 22 National Trails, 472 developed and semi-developed recreation sites including 471 day-use units and 6,749 family camping units, 65,000 miles of roads suitable for recreation travel, 4.2 million acres of lakes and reservoirs, and thousands of areas open to a wide variety of recreational uses;
- about one-third of the Nation's coal supply;
- more than 465,000 acres of designated wilderness in 25 areas and more than 25 million acres under study for possible designation;
- some 35 percent of the Nation's uranium reserves;
- 186 archaeological and historical listings in the National Register of Historic Places comprising more than 3,000 historical and archaeological properties that have nationally significant values;

- world class deposits of phosphate, sodium, lead, zinc, and potash;
- habitat for one out of every five big game animals in the United States, including many caribou, brown and grizzly bears, desert bighorn sheep, moose, mule deer, and antelope;
- nearly 85,000 miles of streams containing trout, salmon, and other sport fish — enough to encircle the Earth three and one-half times;
- prospective sources of geothermal energy on more than 55 million acres, plus 2 million acres of known geothermal resource areas; and
- approximately 96 percent of all wild horses and burros managed, protected, and controlled under the Wild Free-Roaming Horse and Burro Act of 1971.

Multiple-Use Management

BLM manages all the Nation's public lands to meet the needs and desires of the American public. The magnitude and value of these resources frequently lead to conflicting demands and uses for the public lands. The FLPMA mandate for multiple-use management is BLM's most powerful tool for reconciling the differences of opinion about how the public



lands are to be managed. Multiple-use provides for the development of needed resources, while protecting other resource values from inadvertent damage or destruction. Through a planning, decision making, and management process that balances alternative uses and involves the public at all steps, BLM can provide opportunities for many different uses of the public lands and ensure that its many resources will remain available to the public in the future.

American citizens can play a critical part in public land management — today and into the future. How Americans deal with the public lands today and tomorrow will determine what those lands will offer on BLM's 50th, 80th and 100th birthdays. BLM encourages all citizens to learn more about public lands, to become involved in their management, and to enjoy those lands.

Organizational Structure

The BLM's national office is in Washington, D.C. In addition, there are 12 state offices, 58 district offices, and 140 resource area offices. The BLM has about 9,650 employees, most of whom work in field offices in the West. Multiple-use management requires many skills and talents. Foresters, range conservationists, wildlife biologists, archaeologists, surveyors, engineers, recreation specialists, and many other disciplines are needed to care for and manage the public lands.

The following pages provide an overview of public land management during Fiscal Year 1988. Additional information about BLM and the public lands is available from BLM headquarters or local offices.



Energy and Minerals Program

Oil and Gas

Oil and Gas Leasing

The Mineral Leasing Act of 1920, as amended, and the Mineral Leasing Act for Acquired Lands of 1947, as amended, give the Bureau of Land Management authority to issue mineral leases on about 600 million acres of public lands including national forests and private lands where mineral rights have been retained by the Federal Government. The oil and gas leasing program underwent significant modifications during Fiscal Year 1988 upon the passage of the Federal Onshore Oil and Gas Leasing Reform Act of 1987. Under this Act, all public lands that are available for oil and gas leasing must first be offered through a competitive leasing process whereby BLM State Offices offer oil and gas parcels through oral auctions. Parcels that are not sold at these auctions are then available for noncompetitive leasing for a 2-year period. The Act became effective on December 22, 1987, and Fiscal Year 1988 was a transition year when grandfathered applications were processed under the old procedures, while new offers were handled under the new leasing system.

Oil and gas leasing activity grew significantly in Fiscal Year 1988. The number of leases issued was 20 percent higher than in Fiscal Year 1987 and the total acreage leased was 56 percent greater. However, at the end of Fiscal Year 1988 there were 10 percent fewer

leases in effect and 3 percent less acreage under lease than at the beginning of the year. This was due in part to large numbers of lease relinquishments. In other words, lessees were trading old leases for new leases in large volumes in Fiscal Year 1988.

Oil and Gas Operations

BLM is responsible for the inspection of drilling and production operations on Federal leases to ensure compliance with regulations for production, storage, measurement, transportation, or sale of oil and gas from Federal onshore and Indian leases.

As of September 30, 1988, there were approximately 55,500 producible completions, that is, wells demonstrated capable of producing oil and gas in paying quantities, on Federal onshore and Indian leases. During Fiscal Year 1988, there were 988 producible wells completed.

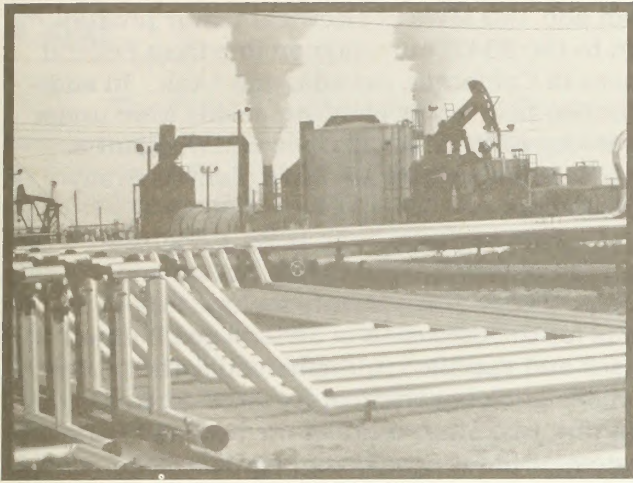
During Fiscal Year 1988, onshore oil and gas leases generated about \$638 million in bonus, rent, and royalty payments to the Federal Government. Fifty percent (or, in the case of Alaska, 90 percent) of this revenue is returned to the States where production occurs. Another Department of the Interior agency, the Minerals Management Service, collects and distributes these receipts.

A significant event in administering oil and gas operations on federally supervised leases this fiscal year was the issuance of final regulations to implement the Federal Onshore Oil and Gas Leasing Reform Act of 1987. These

Fiscal Year 1988 Oil and Gas Leases

	<i>Leases</i>	<i>Acres</i>
Competitive	2,628	2,000,192
Noncompetitive:		
<i>Over-the-Counter</i>	2,079	3,827,671
<i>Simultaneous</i>	8,699	11,541,117
Total	79,338	69,494,511

Leases in Effect as of 9/30/88



regulations went into effect June 15, 1988, and provide that the Secretary of Agriculture shall regulate all surface disturbing activities on Forest Service lands, conducted pursuant to any lease issued under the 1920 Mineral Leasing Act. The regulations also prohibit the Secretary of the Interior from issuing an oil or gas lease or approving the assignment of any such lease to any entity that has failed or refused to comply with reclamation requirements for any prior lease.

BLM is developing a series of 9 Onshore Oil and Gas Orders. Order No. 2, Drilling Operations; Order No. 3, Site Security; Order No. 4, Measurement of Oil; Order No. 5, Measurement of Gas; Order No. 6, Hydrogen Sulfide Operations Operations; Order No. 7, Disposal of Produced Water; Order No. 8, Well Workover/Completion/Abandonment; and Order No. 9, Waste Prevention/Beneficial Use, are expected to be published during Fiscal Year 1989. Order No. 1, Approval of Drilling Operations, was published in 1983.

Section 205 of the Federal Oil and Gas Royalty Management Act (FOGRMA), provides that the Secretary of the Interior may delegate all or part of the authority for inspection and investigations of oil and gas lease sites to State governments. The regulations for delegations of authority went into effect August 17, 1987. A few States have expressed interest, but no agreements have been established.

Section 202 of FOGRMA provides for cooperative agreements with Indian tribes to perform inspection and enforcement activities on Indian leases. Proposed regulations for Section 202 are expected to be published in the Federal Register in Fiscal Year 1989. There are currently two funded cooperative agreements, one with the Ute Mountain Ute Tribe in Colorado, the other with the Navajo in New Mexico.

During Fiscal Year 1988, trainees from the Ute, Navajo, and the Bureau of Indian Affairs attended courses in BLM's inspector training program. BLM also provided opportunities for trainees from other Federal agencies and States whenever they could be accommodated.

The low oil price situation that began in 1986 continued through 1988. For this reason, BLM extended the suspension of production requirements on stripper/marginal well leases for another year to prevent premature abandonment of oil and gas resources. As of September 30, 1988, there were 398 such leases in suspension, representing about 2 percent of the producible Federal leases.

BLM continued its aggressive program to identify all wells that are potentially draining Federal resources. A Drainage Policy Review Team was established and its recommendations are currently being implemented. A task force was established to revise the drainage manual/handbook and incorporate the recommendations of the Drainage Policy Review Team. The revised drainage manual/handbook was issued to the field offices as interim guidelines while the manual/handbook is being completed. BLM's computer-based Potential Drainage Detection System is being improved and enhanced for broader use in BLM.

Geothermal

Geothermal Leasing

The Geothermal Steam Act of 1970 provides BLM authority to issue leases on public, withdrawn and acquired lands administered by the Departments of the Interior and Agriculture. This Act was modified by the Geothermal Steam Act Amendments of 1988, which was enacted on September 22, 1988, and included provisions to expand areas that are closed to geothermal leasing and also to extend all geothermal leases beyond their primary term.

BLM conducts competitive geothermal lease sales for land located in Known Geothermal Resource Areas. In Fiscal Year 1988, competitive lease sales were held in California, Nevada and Utah, resulting in BLM issuance of 37 competitive leases covering 74,691 acres. During this time, 38 noncompetitive leases involving 67,196 acres were also issued.

At the end of Fiscal Year 1988, there were 233 competitive leases in effect on a total

of 406,356 acres (California, 140 leases on 232,662 acres; Nevada, 66 leases on 122,393 acres; Oregon/Washington, 8 leases on 16,825 acres; and Utah, 19 leases on 34,475 acres).

There were 531 noncompetitive leases in effect on a total of 939,581 acres (California, 128 leases on 181,569 acres; Nevada, 160 leases on 262,672 acres; Oregon/Washington, 225 leases on 463,060 acres; and Utah, 18 leases on 32,274 acres). This represents a 16 percent decline in the total number of leases and 10 percent drop in total acreage from Fiscal Year 1987 and is due primarily to the decline in oil prices which has reduced funds available for acquiring and holding geothermal leases by oil companies.

The Geothermal Steam Act Amendments of 1988 requires the Secretary of the Interior to submit a report to Congress on the presence or absence of significant thermal features in Crater Lake National Park by March 22, 1989. The Act also calls for a study of the impact of present and potential geothermal development on Yellowstone National Park.

California expects six more power plants to be operational or fully constructed in Fiscal Year 1989. In Nevada, proposals have been received to construct two additional plants.

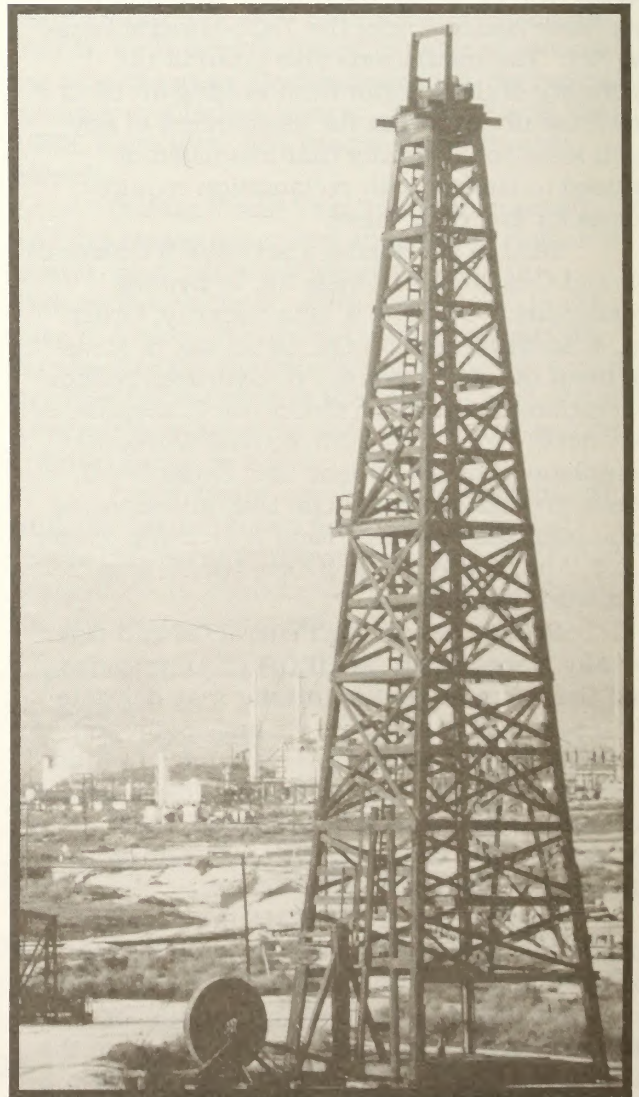
Geothermal Operations

During Fiscal Year 1988, geothermal leases and associated operations generated about \$17 million in royalty, bonus, and rental payments to the Federal Government. This included more than \$3 million in bonus bids for 23,000 acres of Federal lease rights in the Gals Mountain Known Geothermal Resources Area in northern California, indicating continued strong interest in the development of this alternative energy source. Like oil and gas, 50 percent of the lease-generated revenue is returned to the State where the leasing and production activity occurs.

Development of geothermal resources in the United States in Fiscal Year 1988 was concentrated on Federal leases. Construction of new geothermal electrical generating facilities on Federal lands continued at a fast pace in Fiscal Year 1988. Six new plants were at various stages of construction in California, including two 48 MWe plants on the China Lake Naval Weapons Center and two 37 MWe and one 20 MWe plant to Federal leases at East Mesa in the Imperial Valley. These plants will

soon add 190 MWe of electrical power production to the 934.3 currently on line from Federal leases in California, Nevada, and Utah. In addition, two new power plant proposals were under review by BLM in Nevada — a 5 MWe plant at Fish Lake Valley and a 7 MWe plant at Brady Hot Springs.

Late in Fiscal Year 1988, Congress passed the Geothermal Steam Act Amendments. These amendments include new provisions for the extension of Federal geothermal leases and specific requirements for the protection of significant thermal features, such as Old Faithful, in certain units of the National Park System. BLM is developing regulations to implement these amendments.



Coal

The Federal Coal Management Program was formally established by the Secretary of the Interior in 1979. The BLM Federal coal management responsibilities fall into two functionally distinct programs. Coal leasing encompasses all actions taken prior to issuance of a license or a lease. Coal operations encompasses all actions taken after issuance of a license or lease, including exploration.

The BLM serves as the focal point of the Department of the Interior's Federal coal management program and is responsible for ensuring coordination with State and local governments, industry, conservation groups, and other agencies concerned with the management of Federal coal. The Mineral Leasing Act, as amended, the Federal Land Policy and Management Act of 1976, and the Surface Mining Control and Reclamation Act of 1977, provide the statutory bases for the Federal coal management program.

The BLM manages one-third of the Nation's coal resources underlying 75.6 million acres of public lands, predominantly in the western states. These western Federal coal lands contain approximately 60 percent of the total western reserves. Most of these Federal coal reserves are concentrated in five western Federal coal production regions located in Colorado, Montana, New Mexico, North Dakota, Utah and Wyoming.

At the end of Fiscal Year 1988, there were 15.4 billion tons of recoverable reserves on 536 Federal coal leases. During Fiscal Year 1988, there were 122 producing Federal coal leases, which produced 187 million tons. In addition, there was one nonparticipating over-riding royalty agreement for which royalty was

paid on approximately 0.5 million tons of production. The combined production represented 19.5 percent of the total United States production in 1988. Federal coal royalty revenues collected by the Department of the Interior totaled \$169.4 million in Fiscal Year 1988. Coal production on Indian lands totalled 22.3 million tons with royalties of approximately \$38.5 million in Fiscal Year 1988.

Coal Leasing

During Fiscal Year 1988, four of the five remaining Federal coal production regions were either decertified or proposed for decertification. Decertification of the Green River-Hams Fork, Uinta-Southwestern Utah, Fort Union, and San Juan River regions means that these four regions will use lease-by-application procedures rather than the more costly and time-consuming regional leasing procedures.

The decision to decertify was based on long-range market analyses and other factors that indicated that the forecasted demand for Federal coal in these regions was insufficient to justify the use of regional leasing procedures. The Powder River region is the only area still operating under the regional leasing procedures, although leasing activities there are presently suspended because of the lack of demand for additional leasing.

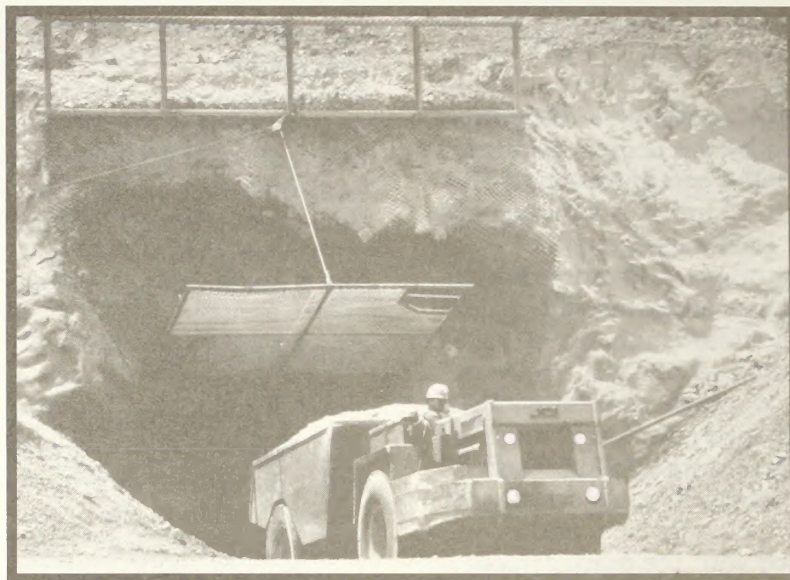
The Regional Coal Teams (RCTs) will be retained in the four decertified regions to advise BLM on lease-by-application and other coal-related activities and to assess coal-market conditions. Should the demand for Federal coal leasing in these regions increase in the future, the RCTs may recommend the return to regional leasing procedures.

Final nationwide guidelines for determining the adequacy of hydrologic data for Federal coal leasing had been prepared and were undergoing review at the end of Fiscal Year 1988.

In addition, 18 coal preference right lease applications (PRLAs) were either rejected by BLM or were withdrawn by the applicants. This brings to 91 the number of coal PRLAs remaining to be processed.

At the end of Fiscal Year 1988, there were 536 Federal coal leases covering 780,495 acres of Federal lands. In addition to these leases and PRLAs, six mining licenses and 11 exploration licenses are being administered by BLM.





Coal Operations

In the 68 years since the Mineral Leasing Act was enacted, more than 1.76 billion tons of coal have been produced from Federal lands. The market value of this coal was nearly \$17.8 billion on which royalties exceeding \$877 million have been paid to the U.S. Treasury. Since 1937, more than 392 million tons of coal have been produced from Indian lands. That coal was valued at more than \$4.1 billion and generated more than \$208 million in revenue for Indian Tribes and allottees.

The BLM has statutory and regulatory responsibility for oversight of coal mining operations on Federal and Indian lands. This responsibility includes providing technical assistance to Indian Tribes, allottees, and the Bureau of Indian Affairs on coal operations responsibilities including: preparing economic, resource, and mining assessments and analyses; evaluating exploration and mine plans; supervising exploration, development and abandonment of operations; recommending bonds; and conducting inspection and enforcement/production verification.

One responsibility on Federal lands is administering 19 logical mining units (LMUs). An LMU is a designated area from which the coal can be developed as a unit and as part of a single mining operation. An LMU may consist of Federal leases only or of Federal and non-Federal lands (including Indian lands), must be contiguous, and cannot exceed 25,000 acres in size. During Fiscal Year 1988, BLM approved three of these 19 LMUs and 11 LMU applications were being processed at the end of Fiscal

Year 1988. During Fiscal Year 1988, BLM processed 46 readjustments of lease terms and conditions, two suspensions of operations and production, and five record-title assignments on Federal coal leases.

The primary purposes of inspection and enforcement (I&E) are to: ensure compliance with the law, regulations, lease terms and conditions, exploration or mine plans, and all notices and orders; identify any trespass; and conduct production verification (PV). PV's primary goal is to verify the amount of coal being mined and to ensure that production is accurately reported, thereby ensuring that proper royalties are paid for the extraction of coal on Federal and Indian lands.

Implementation of national I&E/PV guidelines for coal and other solid minerals in Fiscal Year 1987 included formation of Solid Minerals Assistance Teams (SMATs) to help promote consistency and monitor compliance with the guidelines. During Fiscal Year 1988, the SMATs visited the State Offices in Montana, Wyoming, Idaho, and the associated field offices to review mine-specific I&E/PV plans, inspection procedures, and methods of production verification.

A Technical Procedures Review (TPR) of BLM procedures used in overseeing lessees that hold or acquire Federal mineral leases pursuant to the Mineral Leasing Act was conducted at both the Eastern States Office and the Utah State Office during Fiscal Year 1988. The objectives of the TPR were to: identify any

departures from existing statutes and regulations; highlight any problems with existing guidance; and develop ways in which the existing guidance could be improved.

The BLM is drafting proposed revisions to the coal operations parts of the coal management regulations (43 CFR Group 3400). Some revision is necessary to clarify issues that have arisen since the regulations were published in 1982. The primary areas of consideration are 43 CFR Part 3450 — Management of Existing Leases (lease readjustments, cancellations, and relinquishments); Part 3470 — Coal Management Provisions and Limitations (e.g., rent, royalty and bonding); and Part 3480 — Coal Exploration and Mining Operations (e.g., diligent development, continued operation, and advance royalty).

Three sections of the BLM manual were completed during Fiscal Year 1988. The sections address the following responsibilities for operations on Federal coal and solid mineral leases:

1) *Bonds: This manual section sets out the procedure for establishing proper solid mineral bonds including bonding requirements, types of bonds, bond conversions, procedures for setting bond amounts, qualified sureties, and default and liability termination.*

2) *Logical Mining Units: No previous BLM manual existed on this subject. The manual section contains the guidance for the formation and monitoring of LMUs including the requirements of: a 40-year mine-out; crediting of non-Federal production toward the Federal requirements of diligent development, continued operation, and advance royalty; and the 3-year Resource Recovery and Protection Plan submittal.*

3) *Diligence Requirements: No previous BLM manual existed on this subject. This manual section provides policy and procedural guidance for provisions of Section 7 of the Mineral Leasing Act, as amended, regarding diligent development, continued operation, "forcemajeure" suspensions, advance royalty in lieu of continued operation, and the 3-year requirement for submittal of a Resource Recovery and Protection Plan.*

Oil Shale

The Mineral Leasing Act gives the Secretary of the Interior the authority to lease oil shale on Federal lands. BLM has the Federal management responsibility for 80 percent of the

oil shale resource concentrated in the Green River Formation in Colorado, Utah, and Wyoming. The reserves in this 25,000-square-mile formation are estimated to contain nearly 2 trillion barrels of shale oil. Approximately 731 billion barrels of oil could be recovered with current technology. However, given present technology, the cost of extracting the oil makes it noncompetitive against conventional energy sources.

The only two existing oil shale leases (tracts C-a and C-b in Colorado) were in suspension during Fiscal Year 1988. The lessees maintained the mines and related facilities and monitored the environmental effects while the leases were inactive.

Solid Leasable Minerals

The BLM supervises activities of lessees and permittees that explore, develop, and produce solid leasable minerals on Federal and Indian lands. At the end of Fiscal Year 1988, there were 540 Federal and 388 Indian leases comprising 749,290 acres, plus 119 prospecting permits covering 107,599 acres. In addition, there were 31 preference right lease applications covering approximately 42,699 acres. The combined production of solid leasable mineral commodities from Federal and Indian lands contributed approximately \$730 million to the Nation's gross national product. From Federal lands, this resulted in more than \$26 million in royalty revenues to the U.S. Treasury.

For Federal lands, more than 86 percent of the acreage and nearly 81 percent of the leases for solid leasable minerals involve the following: 1) potash, 1,859,470 tons with a royalty value of approximately \$3 million were produced from 215 leases covering approximately 347,604 acres in New Mexico, Utah, and California; 2) sodium, 3,598,288 tons with a royalty value of approximately \$12 million were produced (mostly soda ash) from 106 leases covering 135,980 acres in Wyoming, California, Nevada, Colorado, and New Mexico; and 3) phosphate, 4,292,800 tons with a royalty value of approximately \$3 million were produced from 116 leases covering 69,460 acres in Idaho, Montana, Utah, Wyoming, California, and Florida.

Twenty other Federal and Indian solid leasable minerals are listed in descending order of acreage: uranium in Arizona, New Mexico,

Washington, and Wyoming; lead/zinc in Missouri; copper in Arizona, Minnesota, Oklahoma, and Washington; sand and gravel in Arizona, California, Montana, Nevada, New Mexico, Oklahoma, Oregon, South Dakota, Washington, and Wyoming; tar sand in Utah; gilsonite in Utah; gold in Arizona, Idaho, and Washington; fluorspar in Illinois; limestone in New Mexico, Oklahoma, Utah, and Virginia; titanium and associated minerals in Minnesota; silica sand in Arizona, California, Nevada, and Oklahoma; feldspar in Georgia; clay in Alabama and Missouri; barite in Arkansas and Missouri; chat in Oklahoma; gypsum in California and New Mexico; asphalt in Oklahoma; tungsten in Nevada; bentonite in Wyoming; and quartz in California and North Carolina.

Other Federal and Indian leases include: amethyst in Georgia; garnet in Idaho; granite in Oklahoma; iron ore in Minnesota; olivine in North Carolina; quartz crystals in Arkansas; combined hydrocarbon leases in Utah; crushed stone in Washington; and dimension stone in Oregon.

Mineral Materials

BLM's mineral material program, sometimes referred to as the "salable minerals program," began with the passage of the Materials Act of July 31, 1949. In 1955, Congress amended this Act by specifying that common varieties of previously locatable minerals, such as sand and gravel and stone, were to be disposed of under the provisions of the 1947 Act. Since that time, BLM has disposed of mineral materials either by sale to the general public or by free-use permit to qualified government or non-profit entities, as provided in the Act.

In Fiscal Year 1988, BLM completed approximately 1,100 sales and free-use permits, representing materials valued at approximately \$4 million. For many western communities, the public lands continue to be the only source for mineral materials, which are used in energy and mineral development, construction and maintenance of transportation systems, and the expansion of communities and industries.

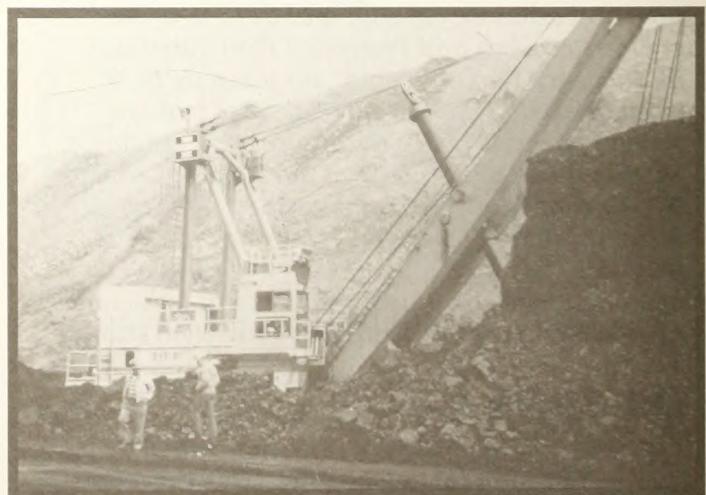
Mining Law Administration

The Mining Law of 1872, as amended many times in its 116-year history, serves as the statutory basis for the disposition of "locatable minerals" from the public domain. Federally

owned locatable minerals include valuable deposits of precious metals, base metals, industrial minerals (such as cement-grade limestone and bentonite) and uncommon varieties of building stone and other mineral materials. In addition, oil shale, which is now disposed of via the Mineral Leasing Act of 1920, may be held, worked, and patented under the mining laws if claim location and discovery of valuable deposits preceded 1920.

The self-initiation feature of the Mining Law continued to serve the Nation's mineral industry well, as shown by the responsiveness of mining companies exploring the public land to locate mining claims as the market for locatable mineral commodities demands. In recent years, increased prices for gold combined with refinements in mining methods have led to a mining claim boom on public lands in the West, particularly in Nevada, California, and Arizona. In Fiscal Year 1988, Newmont Gold Mines, located 40 miles west of Elko, Nevada, continued to surpass the Homestake Mine in South Dakota as the largest producing gold mine in the United States. In Fiscal Year 1988, 14 of the top 25 U.S. gold mines were on, or partially on, lands managed by BLM.

As increased interest in gold brought on by higher prices and a rebounding metals market caused greater activity, BLM continued to be challenged to provide for mineral development under multiple-use management while preventing any unnecessary or undue degradation of land to occur.



In Fiscal Year 1988, BLM accepted 182,543 mining claims and millsites for initial recordation under Section 314 of FLPMA. Annual filings of assessment work affidavits (or notices of intent to hold) served to hold 460,465 mining claims of record. Failure to file such documents annually is conclusive evidence of abandonment of the mining claim.

Under the surface management regulations administered by BLM, operators proposing to disturb the surface of public lands filed approximately 469 plans of operation (generally for disturbances of greater than 5 acres) and 2,034 notices (for lesser impacts) in Fiscal Year 1988. Reviews of the proposed activities ensure that no unnecessary or undue degradation of the public lands is likely to occur.

BLM continued in Fiscal Year 1988 to emphasize its responsibility to promptly adjudicate mineral patent applications, reject or contest invalid mining claims, and issue patent to those mining claimants demonstrating a discovery of a valuable mineral deposit. As a result, 5,549 acres of mineral land passed into private ownership as patented lode or placer mining claims. Under the millsite provisions of the mining laws, 365 acres of nonmineral land were patented for uses reasonably incident to mining and milling purposes.

Hazardous Materials

The Hazardous Materials Management Program's goals are the protection of public health, safety, and the environment, compliance with applicable laws, and the control of Federal liability.

The program is based on the requirement for compliance with the Resource Conservation and Recovery Act, as amended, which requires treatment, storage, and disposal of hazardous wastes; the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, which regulates cleanup of spills and abandoned waste sites; and other Federal and State laws that regulate the management of hazardous materials.

During Fiscal Year 1988, program activities for hazardous materials management continued in all BLM State Offices. Field officials were involved in 25 emergency hazardous waste cleanups on the public lands.

Other significant accomplishments included conducting land status assessments;

conducting inventories to identify, or confirm the presence of, hazardous wastes on public lands; providing safety training and material for field staff; working with the States to initiate further studies of appropriate sites; providing extensive policy, technical, and program assistance and support to other BLM program divisions on the hazardous materials aspects of their programs; and eliminating the backlog of sites requiring assessment and investigative analysis.

BLM completed 56 preliminary assessments and 21 site investigations in Fiscal Year 1988. A contract was signed in Fiscal Year 1988 for the preparation of a remedial investigation/feasibility study (RI/FS) on a site in New Mexico. It should be noted that BLM's potential liability for most sites will be that of the landowner and not as a generator of the wastes or facility operator. In a few cases, primarily mining sites, BLM will be an "innocent landowner" for purposes of the law, but it may still have cleanup responsibility for abandoned sites because the Environmental Protection Agency (EPA), by law, cannot expend Superfund monies to cleanup Federal property. This limitation on EPA makes it imperative for BLM to find viable, potentially responsible parties to clean up the problems which they created.

BLM supported the recently enacted amendment to Section 3 of the Recreation and Public Purposes Act. The amendment authorizes BLM to provide lands by patent to local governments for municipal solid waste land fills or other purposes that may result in the release of hazardous materials. This legislation assures that much needed landfill sites will be available at reasonable costs to small communities and that these communities rather than the Federal taxpayer will have responsibility for their operation and maintenance. It also assures that supervision of local waste sites will be handled by State and local governments and the EPA, entities that have the necessary expertise to handle waste sites that may contain hazardous materials.

In Fiscal Year 1988, BLM signed a \$320,000 contract with the National Academy of Engineering to evaluate BLM's Hazardous Materials Program at its 5-year mark. This evaluation will look at the hazardous materials laws and problems of the 1990s and the organizational resources BLM has to deal with these issues.

Land Programs

Lands

During Fiscal Year 1988, BLM's lands program focused on:

- *State, large landowner, and high public interest land exchanges;*
- *responding to State and local government requests for acquisition or use of public land for community expansion, recreation, and public-purpose activities;*
- *collection of data and entry into the Automated Lands and Minerals Records System (ALMRS);*
- *resolving cases of unauthorized use of public lands;*
- *reducing case backlogs;*
- *processing of desert land entry applications and FLPMA Section 203 land sales; and*
- *amending the Recreation and Public Purposes Act to allow BLM to deal more effectively with the problems of waste disposal on public lands.*

Land exchanges (trading public land for State or private land) provide opportunities to simplify ownership patterns, improve respective management programs, acquire lands with high public values at little or no cost to the Federal Government, and meet both public and private needs. Consistent with the Administration's vision of Federalism — the return of authority and discretion to the local level of government — BLM's land exchange program helps State and local communities better manage their own lands for the betterment of their citizens. The land exchanges increase local control of resources and lands needed to be responsive to the needs of the people to support their own growth and well-being.

The amount of acreage conveyed through exchanges has climbed steadily. In 1981, nearly 49,048 acres were conveyed, as compared to Fiscal Year 1988, when 67 exchanges conveyed 233,434 acres of public land to State and private interests in return for 378,185 acres.

The Recreation and Public Purposes Act authorizes the Federal Government to lease or convey lands at no cost to State and local governments for public recreation purposes, and to lease or sell lands to government and nonprofit entities for other public purposes at less than fair market value. In Fiscal Year 1988, BLM processed 135 applications under this act.

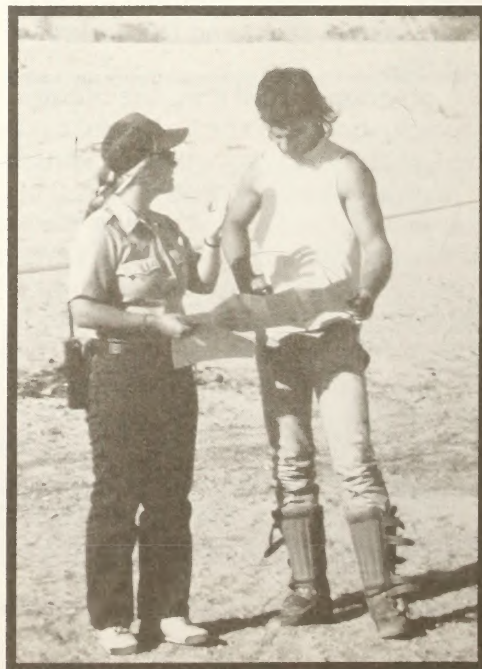
Automation of BLM's land and minerals records is progressing rapidly to meet a 1993 completion deadline. Automation of these records, plus inputting survey information and resource data, make up the BLM's Land Information System (LIS). This system will provide accurate, up-to-the-minute information to BLM managers and the public regarding public land management. It is estimated that the LIS involves more than 1 billion pieces of information.

Public lands trespass continues to be a problem. During Fiscal Year 1988, BLM worked on and closed 964 trespass cases.

Processing of Desert Land Entry Act applications constituted a major workload in Idaho and Nevada during Fiscal Year 1988. BLM processed 176 cases during the year.

BLM continued to make selected public lands available for sale to allow for community expansion and other purposes. Most of the land sold consisted of small, isolated parcels. Tracts are carefully selected through BLM's land-use planning process to ensure that sale is appropriate. During Fiscal Year 1988, 2,957 acres of public land were offered for sale at the appraised fair market value.

A major accomplishment in Fiscal Year 1988 was passage of legislation amending the Recreation and Public Purposes Act. The amendment allows the Secretary of the Interior to patent Federal lands to local governments



to patent Federal lands to local governments with a limited reverter provision which provides that if the lands are not used as specified in the application, within 5 years of the date of conveyance, the lands may revert to the Federal Government. However, the patent also contains a provision requiring that under no circumstances would the lands revert to the Federal Government if they are used for solid waste disposal purposes. With the consent of the patentee, and where patents have already been issued with the reverter provision and the lands are found to have been used for solid waste disposal or for any other purpose that may result in the disposal of hazardous substances, the Secretary may renounce the reverter provision at no cost to the local government. These provisions would place full responsibility for landfill sites management on the local community and the State.

Acquisitions

During Fiscal Year 1988, BLM completed 196 acquisition actions of land or interests in land in support of its resource programs. This includes 91 road easements to provide public access to public land. The remaining acquisitions were for administrative access and projects which enhance public land management.

Land and Water Conservation Funds were used to acquire 21 parcels of land and eight conservation easements.

Rights-of-Way

During Fiscal Year 1988, BLM authorized 2,854 rights-of-way under various authorities, including the Federal Land Policy and Management Act. Diverse uses of the public lands requiring rights-of-way authorization include pipelines and related facilities, communication sites, hydropower sites and facilities, roads, equipment storage sites, and others.

Withdrawals and Withdrawal Review

During Fiscal Year 1988, the Secretary of the Interior approved 16 withdrawals encompassing 15,617 acres to protect archaeological, historic, paleontological and recreation sites, natural areas, administrative sites, a seed

orchard, a fish hatchery, a radio relay site, and a dam and reservoir site. Of the 15,617 acres, nearly 10,000 acres were withdrawn to protect the recreational and scenic values of the Lower Salmon River in Idaho.

The Secretary also approved eight revocations encompassing 24,633 acres. All but 170 acres were in the State of Alaska to allow selection of the land by the State of Alaska or Native groups. The remaining action revoked a Bureau of Reclamation withdrawal after January 1, 1981.

In addition, the Secretary modified one withdrawal in Alaska to allow for selection and conveyance of the oil and gas rights to 678 acres of public land to the State of Alaska.

On July 15, 1985, the National Wildlife Federation filed suit in the U.S. District Court challenging the withdrawal and classification processes and actions taken by BLM since January 1, 1981, under Sections 202(d), 204(a), and 204(l) of FLPMA. A preliminary injunction was issued February 10, 1986, specifically prohibiting the Secretary of the Interior from modifying, terminating, or revoking, in full or in part, under FLPMA, any withdrawal or classification that was in effect on January 1, 1981; or taking any action inconsistent with the specific restrictions of any withdrawal or classification in effect January 1, 1981. Exceptions to the injunction included revocations in Alaska to permit State or Native selections. Thus, the modification and revocations identified above all fell outside the scope of the preliminary injunction.

On January 25, 1988, the Department of Justice filed a Petition for Rehearing En Banc with the U.S. Court of Appeals for the District of Columbia Circuit. On April 29, 1988, a Court of Appeals denied the petition and expressed its dissatisfaction with District Court Judge Pratt's failure to proceed in a timely manner with plenary consideration of the merits of the case and directed the District Court to "proceed with dispatch."

The continuation of the preliminary injunction (PI) during Fiscal Year 1988 severely affected BLM, other Federal agencies and third parties. The PI prevented returning land encompassed in obsolete withdrawals to multiple-use management for completion of land exchanges, some of which were environmentally enhancing, land sales, and mining activities. Congress did provide relief for several specific situations by enacting exemptions to the PI.

Alaska Lands

In Fiscal Year 1988, BLM in Alaska patented more than 2.7 million acres of land to the State of Alaska under the Statehood Act, bringing the total acres transferred to approximately 82 million. Title to about 2 million acres was transferred to Alaska Native corporations in Fiscal Year 1988 to meet the requirements of the Alaska Native Claims Settlement Act. The Native regional and village corporations have received approximately 35.3 million acres to date. The conveyance of lands to the State and to Native corporations satisfies one of BLM's top objectives. In addition, continued efforts to transfer individual parcels of land to Alaska Natives successfully led to more than 205 certificates of ownership being issued under the Native allotment program.

During the fiscal year, BLM provided Congress with information on the impact of submerged lands on current State and Native land selections. A bill was passed on the submerged lands issue. A report to Congress is due in August 1989.

Field surveys were completed for 650 Native allotments, small tracts and 1,340 miles of rectangular net. Work continued allowing placer mining to continue in the State. A special team was created to develop court-mandated Environmental Impact Statements (EIS) for four watersheds affected by placer mining. Three EISs have been prepared; the fourth is expected in January 1989. In August 1988, the EIS for the development of a gas pipeline from the North Slope south to tidewater was completed and a right-of-way is scheduled to be issued in October 1989. Planning efforts for the Central Arctic Management Area/Utility corridor continued with public hearings and draft review. Due to comprehensive discussions with State of Alaska representatives concerning possible land selections within this planning area and other areas of Alaska, further work on this Resource Management Plan (RMP) was deferred for the remainder of Fiscal Year 1988. A final RMP is expected in June 1989.

Cultural Resources

The BLM is responsible for managing the Federal Government's largest, most varied, and scientifically most important body of cultural resources. No other agency rivals BLM in sheer quantity, diversity, or importance of

cultural resources, known or projected. To date, approximately 143,000 archaeological and historic properties have been recorded on public lands. These properties have been found on the nearly 8.5 million acres of public land inventoried, which represents less than 3 percent of lands administered by BLM. Taking into account all BLM lands, site totals are likely to run well into the millions. No other agency comes close to BLM in number of sites.



Cultural resources are protected by numerous statutes, most significantly FLPMA, the National Historic Preservation Act of 1966 (NHPA), and the Archaeological Resources Protection Act of 1979 (ARPA). These laws establish the primary objectives of BLM's cultural resource program, which are the identification of the physical evidence of at least 10 millennia of human occupation in the western hemisphere, the evaluation of the relative importance of these physical manifestations, and the determination and protection of the appropriate uses of those resources.

In Fiscal Year 1988, one of the BLM's top priorities in the cultural resource management (CRM) program continued to be protecting our Nation's fragile cultural legacy from looting and destruction. Archaeological Resources Protection Act Plans were prepared in each BLM State, describing the current condition of archaeological resources, protective and public awareness measures undertaken to date, and future measures proposed.

In Fiscal Year 1988, the BLM devoted roughly a third of its operating budget to site management and protection. The money was used for a combination of physical protection and administrative measures, along with an aggressive public education/awareness program. Approximately 3,000 cultural properties

received some direct, site-specific protection, such as being signed, fenced, maintained, interpreted, stabilized, patrolled or closely monitored on a regular basis. Among the sites receiving protection were the five world class Chacoan Outliers in New Mexico recently placed on the World Heritage List. In addition, another 70,000 cultural properties and 5.8 million acres received some broad form of protection through a combination of aerial, foot, horseback, and/or vehicular patrol and surveillance.

In Fiscal Year 1988, BLM augmented the number of rangers and expanded their role in site patrol and surveillance. Site stewards were also used to monitor sites and areas where looting is occurring. In addition, sites were protected through administrative withdrawal, cooperative protection agreements, such as with the Arizona National Guard for aerial surveillance of sites, and cooperative management agreements with universities, historic preservation groups, volunteer organizations, and nonprofit groups. The cooperative management agreements were used for a broad range of identification, recordation, study, protection, preservation, stabilization and interpretation projects. It is estimated that approximately 18 work years of contributed time has been provided to the BLM for the benefit of the cultural resource program through volunteers/cooperative management agreements.

In the realm of public awareness and education, BLM was an active participant in "Archaeology Week" programs in Arizona, New Mexico, and Utah. In addition, BLM participated in other regional anti-looting programs such as interagency archaeological vandalism task forces found in New Mexico, Utah, and Oregon. BLM also participates as a full partner in the Society for American Archaeology-sponsored anti-looting initiative, titled "Saving the Past for the Future."

In Fiscal Year 1988, far more than half of BLM cultural resource staff time was devoted to compliance with section 106 of the National Historic Preservation Act of 1966 in response to approximately 8,000 land use project applications. This allowed BLM archaeologists to learn much about previously unknown or poorly understood areas.

To ensure that section 106 review was completed in a timely and responsive manner on the large number of land use project applications, BLM issued approximately 350 cultural resource use permits to individuals, consulting firms, and educational institutions. These

entities completed various cultural resource inventories and mitigation work on BLM-licensed or approved projects.

Wilderness Resources

BLM now manages 25 wilderness areas in eight States, totaling approximately 465,000 acres. The total includes two new areas in New Mexico designated in December 1987 of 82,000 acres, which are managed on an interagency basis between the National Park Service and the BLM, and are also integral units as part of a National Monument and National Conservation Area.

By the end of Fiscal Year 1988, BLM had completed all of the field work in wilderness study areas and began preparation of the final wilderness study reports that serve as the major documentation for the statewide wilderness reporting package. An additional 21 final environmental impact statements for study areas were filed with the Environmental Protection Agency during Fiscal Year 1988; the remaining EISs to be completed during Fiscal Year 1989.

BLM revised and updated the Interim Management Policy Guidelines for wilderness study areas. The guidelines are part of the BLM permanent directives system and specify what activities may or may not be undertaken in study areas. BLM also issued permanent guidance on mapping standards and policies for fish and wildlife activities for BLM-designated wilderness areas.

All work on the statewide reporting package for California has been completed and is scheduled for approval by the Secretary of the Interior and submission to the President and the Congress in Fiscal Year 1990. Additionally, work was completed on a specially mandated Congressional study in Alaska, and a recommendation for designation of a 41,000-acre area on the Nigu River was approved by the Secretary of the Interior and will be submitted to the President and the Congress in December 1988.

Congress has not acted on a package of 30 areas submitted by the President in April 1985. An additional area, comprising 5,000 acres in the State of Washington has also been submitted to the President with a recommendation as nonsuitable for wilderness and is to be released to full multiple-use management activities. This area is the only BLM study area in the State of Washington.

Recreation

Fiscal Year 1988 was an exciting year for the BLM recreation program. On March 1, 1988, the BLM Director approved the Bureau's new long-range recreation policy: *Recreation 2000: A Strategic Plan*. With the release of *Recreation 2000*, the BLM has taken an important step in revitalizing its outdoor recreation program to meet anticipated demands. The plan is designed to make recreation an equal partner within the family of multiple-use management. It provides a clear statement of BLM recreation management policies and goals. It describes the policies that will guide the BLM and the issues BLM, as well as the public land users, face. The plan also highlights where BLM will concentrate its efforts in agency programs related to recreation.

BLM's general recreation policy states that the BLM will ensure the continued availability of public land for a diversity of resource-dependent outdoor recreation opportunities while maintaining its commitment to managing the public lands as a national resource in harmony with the principle of balanced multiple use.

In Fiscal Year 1988, the draft plan was completed for the San Pedro area in Arizona, which was acquired in a land exchange in 1985. This major recreation area was opened to the public in 1989. In addition, management of the California Desert Conservation Area continued to be improved with the addition of 26 law enforcement rangers. Also in Fiscal Year 1988, the 266,690-acre El Malpais National Conservation Area was designated.

A major land exchange was completed in September in the Red Rock Recreation Lands area of Nevada. The exchange involved the Summa Corporation and the Nature Conservancy. Through the efforts of the Nature Conservancy, BLM acquired 4,863 acres through exchange and purchased an additional 439 acres using funds from the Land and Water Conservation Act. Summa Corporation acquired, through exchange, 3,768 acres in the Las Vegas valley. The lands acquired by BLM contain high-value recreation and cultural resources in and adjoining the Red Rock Recreation Lands area. The purpose of the exchange was to block up land within the recreation area and protect adjacent land from development that could have affected the resources within the recreation area. The entire transaction was estimated to be worth \$2.8 million.

Public lands accommodated more than 57.8 million recreation visits, an increase of 3 percent over Fiscal Year 1987, and more than 461 million visitor hours, representing a 10 percent decrease from the previous year. During Fiscal Year 1988, 349,500 volunteer hours from 5,452 volunteers were contributed to the recreation program with a savings to the Federal Government of more than \$216 million.

Overall during Fiscal Year 1988, 64,852 camping and day-use permits were issued, a 16 percent increase from Fiscal Year 1987. An additional 12,210 special recreation permits were issued, a 17 percent increase over the previous year. More than \$1.46 million in fees were collected. This represents a 23 percent increase in camping and day-use fees collected, and a 10 percent increase in fees collected in the special recreation permit program.

Through Fiscal Year 1988, approximately 75.5 million acres of public land were designated open to off-road vehicle use (subject to special operating requirements); approximately 50 million acres were designated for limited off-road vehicle use; and approximately 2.5 million acres were closed to off-road vehicle use. An additional 51.9 million acres are currently awaiting final designation with 20.7, 20.8, and 10.4 million acres proposed for open, limited, and closed designation, respectively. There are 103.6 million acres remaining undesignated.



Renewable Resources Programs

Wildlife and Fisheries Habitat

Wildlife habitats on BLM-administered lands provide homes to more than 3,000 species of mammals, birds, reptiles, fish, and amphibians. No single Federal or State agency manages more fish and wildlife habitat than the BLM. Cooperation between State and other Federal agencies having primary responsibility for wildlife and fisheries population management is essential to the success of the BLM's program.

Fish and Wildlife 2000

Fiscal Year 1988 marked the first full year of implementation of *Fish and Wildlife 2000*, the BLM's strategic plan for fish and wildlife resource management on the public lands through the year 2000 and beyond. Already this plan has brought clearer focus to the BLM's wildlife and fisheries program, resulting in a broader consensus in program direction, and providing a more businesslike approach to the fish and wildlife resources program.

During Fiscal Year 1988 the following implementation actions were completed:

State Fish and Wildlife 2000 — Work was initiated on BLM state-level Fish and Wildlife 2000 plans which will provide a blueprint for BLM state-level programs.

Human Resource Development — Began implementing recommendations of an interdisciplinary team of biologists, managers and personnel experts to enhance career development and job enrichment of BLM biologists, because most have been in place several years.

Increased Private Investments — Greater attention to the development of partnerships with a host of organizations has resulted in doubling investments from sportsmen's groups and others (from \$1 million in Fiscal Year 1986 to more than \$2 million in Fiscal Year 1988). This also has enabled BLM to better capitalize on the Challenge Cost Share funds made available from Congress. For example, this fiscal year Memorandums of

Understanding were signed with Rocky Mountain Elk Foundation, Quail Unlimited, National Wild Turkey Federation, Foundation for North American Wild Sheep and Trout Unlimited. Threatened/Endangered Species (T/E), Desert Tortoise — BLM administers 48 million acres of tortoise habitat or about 63 percent of the U.S. habitat. In 1986 a team of BLM biologists and managers plus a representative of a State wildlife agency was established to formulate an approach to ensuring viable populations of desert tortoises. In 1987, the BLM Director endorsed the team's report and recommendations. Recently, a rangewide management plan for the four-state area involving California, Nevada, Utah and Arizona, was approved by the Director. In addition, a Management Oversight Group was created to guide future efforts and better ensure interagency coordination of research, studies and on-the-ground management.

Threatened and Endangered Fisheries Habitat Management — Currently about 100 species of fish federally listed as T/E or as candidate species can be found on BLM lands. A team was established to formulate better strategies for dealing with these species in a proactive manner. The report and recommendations of that team will be available in early Fiscal Year 1990.

Special Status Plants — About 45 listed T/E plants and 650 candidate plant species are found on BLM lands. Proactive management of these species poses significant challenges. In Fiscal Year 1988 plans were made to establish a team to formulate strategies for implementing the *Fish and Wildlife 2000* objectives as they relate to plants. This team should become operational in early 1989.

Fisheries

Anadromous Fish Habitat Management — BLM administers more than 13,000 miles of habitat in the Pacific Northwest and Alaska for salmon and steelhead. In recognition of the \$40 million commercial value and 1.5 million days of recreational fishing for these species, a team of biologists and managers developed strategies for implementing the anadromous



fish objectives in *Fish and Wildlife 2000*. The team outlined a 12-year program costing about \$25 million with returns of 2.5 times investment costs, not counting important social, biological, and scientific values to be realized. BLM is beginning to implement the actions in that plan within the constraints of the budget.

Fisheries Assessment and Strategy Development – A team which includes directors of two State fish and wildlife agencies and the American Fisheries Society completed an assessment of the current fisheries program and identification of strategies for achieving the fisheries objectives in *Fish and Wildlife 2000*. This plan will be presented to the Director in early Fiscal Year 1989 and will apply to the 85,000 miles of fishable streams and 4 million acres of reservoirs managed by BLM.

Wildlife

Waterfowl Habitat – BLM lands contain 20 million acres of wetlands and waterfowl habitat. In Fiscal Year 1988, an interdisciplinary team identified strategies for achieving the waterfowl habitat goals in *Fish and Wildlife 2000*

and integrating those strategies with the North American Waterfowl Plan.

Desert Bighorn Sheep Rangewide Plan – BLM manages 80 percent of the desert bighorn sheep habitat in this country. A management plan for desert bighorn that encompasses six western states was completed in Fiscal Year 1988. This is the first such interstate, range-wide plan in the history of the program.

Watchable Wildlife – Fiscal Year 1988 brought the implementation of BLM's "watchable wildlife" initiative on public lands. Watchable wildlife activities, or the nonconsumptive use of fish and wildlife resources, have greatly increased over the last 20 years. Activities such as birdwatching, nature study and photography are expanding at a faster rate than other traditional consumptive uses. BLM will identify viewing opportunities throughout the public lands.

Animal Inn – BLM, together with the U.S. Forest Service, is implementing a national program to create an awareness of the value of "life in dead trees." The program will promote safeguarding "Animal Inns," and create an awareness that certain snags and dead trees provide homes for nongame and other wildlife.

Field Accomplishments

BLM field offices completed many projects and actions on behalf of fish, wildlife and special status plant species.

About 700 fish and wildlife habitat projects were constructed in Fiscal Year 1988, including water facilities, fences, den and nest facilities, seedings, and instream flow structures. These projects brought the total number since 1982 to 3,911.

Habitat management plans, cooperatively developed with State wildlife agencies and conservation organizations, focused on areas with significant fish and wildlife resources. Through Fiscal Year 1988, the BLM prepared or revised 400 habitat management plans encompassing 50 million acres. Of these, 107 have been fully implemented, while 212 are in the process of being implemented. Also, through Fiscal Year 1988, 73 recovery plans have been prepared for 50 animals and 16 plants, and an additional 12 are under development.



More than 18.2 million acres of fish and wildlife habitat, including habitats for threatened or endangered species, were inventoried. Habitat was monitored to determine whether fish and wildlife habitat management objectives were being met in BLM land use management activities. In Fiscal Year 1988, more than 1,800 plans were monitored.

Efforts were continued in California to develop and implement, with other agencies and industry, a special management area in the San Joaquin Valley of California (Carrizo Plain) for several endangered species. The management goal of Carrizo Plain is to protect the habitat for endangered species or other rare plants and animals. The development of oil and

gas resources will be expedited in other areas.

BLM continued working with the Peregrine Fund, and other agencies and organizations, to fund reintroduction of peregrine falcons in historic habitats. These efforts are moving this species toward recovery.

Efforts were continued in Idaho to maintain the Isolated Tracts Program that provides winter and nesting habitat for upland birds. Also continued were restoration of big game winter ranges destroyed by wildfires and implementation of a "greenstripping" program to reduce habitat loss from wildfires.

Forestry

Approximately 48 million acres of BLM-administered lands are forested. Twenty-two million of these acres are located in Alaska and 26 million in the lower 48 States. Forest lands are classified as commercial, capable of producing commercial timber, or as woodlands. Many forest products are harvested from woodlands. These products include, but are not limited to fuelwood, Christmas trees, and pine nuts.

The 22 million acres of forest lands in Alaska consists of approximately 7 million acres that are capable of producing commercial timber and 15 million acres of woodland. Because of recent land status changes in Alaska, only minimal forest management activity is presently occurring on these lands. The 26 million acres of forest lands in the lower 48 States consist of 5 million acres of commercial forest lands and 21 million acres of woodland. The 5 million acres of commercial forest lands are located in the states of California, Colorado, Idaho, Montana, Oregon, New Mexico, and Wyoming. Approximately 2.4 million acres of the commercial forest lands are located in western Oregon and are considered to be some of the most productive forest lands in the world.

In western Oregon, 1.033 billion board feet of timber were offered and sold during Fiscal Year 1988 and 1.64 billion board feet of timber were harvested. Receipts from the harvest of this timber exceeded \$200 million. Harvest levels were greater than in past years because of increased demand and excellent market conditions. The full allowable harvest level of 1.183 billion board feet was not offered and sold due to a court injunction halting the harvest of timber assumed to be habitat for the Northern Spotted Owl.

On public forest lands outside western Oregon, BLM produced overall resource benefits that exceeded investments. In achieving this objective, 63 million board feet of timber were offered and sold. Nontimber products included the sale of enough fuelwood to heat 12,000 homes, a sufficient quantity of corral poles and fence posts to build nearly 300 miles of fence, and more than 50,000 Christmas trees. These products were sold to commercial operators, as well as to individual families.

Trees were planted on about 32,000 acres of forest lands in western Oregon, and 2,340 acres in other areas. In addition, maintenance of existing plantations was completed on more than 21,300 acres in western Oregon, and 1,394 acres of timber stand improvement was completed elsewhere.

The Federal Timber Contract Payment Modification Act passed in 1984 requires the Secretary of the Interior to include in this report any actions that discourage bidding such that a purchaser is unable to perform contracts or any bidding that leads to speculation. In the process of monitoring bidding practices, BLM has discovered no evidence that indicates abuses. All timber sale contracts currently being purchased are being performed, and there is no evidence of speculative bidding. Rules implemented in 1982, requiring up-front cash deposits and scheduled payments and establishing procedures to offer more short-term contracts, have been effective. However, BLM will continue to monitor bidding practices.

Wild Horses and Burros

The major responsibilities of the BLM in administering the Wild Free-Roaming Horse and Burro Act (Public Law 92-195, as amended) fall into two categories: the protection, management, and control of wild free-roaming horses and burros on the public lands and the disposition of excess wild horses and burros that must be removed from these lands.

In Fiscal Year 1988, BLM removed 8,857 excess wild horses and burros from the public lands. However, because of an annual rate of increase calculated to be 18 percent and the transfer of one herd area from Forest Service jurisdiction to BLM, the reduction in total population was small, from 43,286 wild horses and burros at the beginning of the fiscal year to 42,347 at the end of the year (see Table). Through the resource management planning

process, BLM estimates that the overall appropriate management level will be about 31,000 wild horses and burros.

Once removed from the public lands, healthy excess wild horses and burros are made available for adoption by qualified individuals.



In Fiscal Year 1988, BLM placed 10,232 animals in private care through the adoption program. About 5,500 of these adoptions were accomplished through fee waivers, which allowed BLM to place otherwise unadoptable animals in private care. Wild horse interest groups and humane organizations opposed fee waiver adoptions because they typically were large-scale transactions where 100 or more animals were adopted by many individuals but were maintained in one location. A few instances of neglect or abuse of animals adopted under fee waivers caused increased concern about this method of adoption, and BLM first suspended in April, and then terminated in September, the fee waiver adoptions.

The BLM was then faced with finding another means of disposing of healthy excess wild horses that could not be placed through the regular adoption program. By law, such animals should be humanely destroyed, but BLM has maintained a voluntary moratorium on destruction of healthy animals since 1982. In Fiscal Year 1988, Congress expressly prohibited the use of appropriated funds to destroy healthy wild horses or burros.

Lacking both destruction authority and the use of fee waivers, BLM turned to the sanctuary concept as an acceptable means to maintain unadopted wild horses. For more than 3 years, wild horses awaiting adoption had been maintained in feedlots, but this approach was criticized by some as both expensive and inhumane because free-roaming animals were closely confined.

The first sanctuary for unadopted excess wild horses was established in summer 1988 in western South Dakota through the cooperation of the State of South Dakota, the South Dakota Community Foundation, the Institute of Range and the American Mustang and the BLM. It is envisioned that fundraising efforts will allow the sanctuary to become independent of Federal funding after 3 years.

Meanwhile, the regular adoption program succeeded in finding homes for slightly more than 4,700 wild horses and burros, with most of them adopted at 68 temporary adoption events. In anticipation of an intensified adoption program in the east for Fiscal Year 1989, a third contract adoption center was opened in 1988 near London, Ohio. The two other eastern centers are in Cross Plains, Tennessee, and Lewisberry, Pennsylvania. The contractors for these three centers also help operate temporary adoption events held throughout the year in the

east. A little more than a third of these events take place under the auspices of BLM's Eastern States Office, with the rest occurring under the supervision of BLM's western State Offices, particularly California and New Mexico.

To aid in placement of some of the older (3-6 years) wild horses and to increase the chances of long-term adoption success, four states have established inmate-wild horse training programs. The participating states include California, Colorado, New Mexico, and Wyoming, with New Mexico expanding its program to three sites in Fiscal Year 1988. These programs provide benefits for the inmates and the animals, which are partially gentled by volunteer prisoners working under the supervision of individuals knowledgeable in horse care and training. The animals are then made available for adoption through the regular adoption program.

Fiscal Year 1988 Wild Free-roaming Horses and Burros

State	Horses	Burros	Total
Arizona	191	2,005	2,196
California	1,884	1,438	3,322
Colorado	478	0	478
Idaho	431	1	432
Montana	128	0	128
Nevada	27,230	1,171	28,401
New Mexico	28	0	28
Oregon	2,170	6	2,176
Utah	1,778	105	1,883
Wyoming	3,303	0	3,303
Total	37,621	4,726	42,347

Rangeland Resources

During Fiscal Year 1988, the BLM monitored more allotments than ever before. The BLM also emphasized the importance of the selective management, range improvement and riparian policies in developing coordinated management prescriptions for the proper management of upland and riparian ranges. Eight state strategic plans were prepared with support from a wide array of interest groups.

Range

Since the passage of FLPMA, the focus of the range management program has been expanded to reflect consideration of all uses of public rangelands. The principal emphasis of the range management program is on the proper, integrated management of riparian and upland ranges to protect and improve rangeland resources for all of the multiple uses, including management of livestock grazing. Sound land use planning, done in coordination, consultation and cooperation with range users, interest groups, and other parties at the national and local levels, provides the basis for development of resource management objectives.

Following completion of land use planning and preparation of environmental impact statements (EIS), the resulting decisions are implemented through preparation of allotment management plans which identify grazing management prescriptions and other on-the-ground activities needed to achieve site-specific vegetation and other resource management objectives. The BLM prepared 143 allotment management plans during Fiscal Year 1988.

A major effort of the range management program has been the completion of EISs that address the impacts of livestock grazing on more than 170 million acres of public lands in 10 western states. Of the 144 total grazing EISs, 143 are now complete, including four completed in Fiscal Year 1988.

The emphasis of the program has shifted from preparation of grazing EISs to the proper, integrated management of rangelands. This is being achieved, in part, by documenting the benefits that can be realized and by informing and motivating others through the identification of successes. The growing support of the livestock industry for riparian area improvement is one example of how an awareness of benefits motivates affected interests.

In Fiscal Year 1988, about 3.1 million acres were inventoried using the ecological site inventory method. The information provides a basis for land use planning, identifying and supporting needed management actions, and detecting changes in resource condition through monitoring studies. Rangeland monitoring continues to be among BLM's top priorities. At the end of Fiscal Year 1988, there were 10,000 allotments with established monitoring systems. A workshop was held in Nevada in November 1987 for field office monitoring coordinators to further explain and refine monitoring policy and procedure and to ensure that effective monitoring activity would continue in future years.

Range improvements continue to be an important part of the range management program. During Fiscal Year 1988, range improvements included development of 482 water facilities, construction of 595 miles of fencing, development of 70 management facilities, treatment of 57,528 acres of vegetation, and maintenance of 75 improvement projects.

The BLM and Forest Service continue to actively support the Experimental Stewardship Program (ESP), as authorized by the Public Rangelands Improvement Act of 1978. The purpose of the ESP is to foster innovation, cooperation, and better range stewardship, ultimately leading to the improved condition of public lands. During Fiscal Year 1988, the Sixth National Resource Stewardship Conference was held in Montana. The ESP continues to improve communication and cooperation between private range users and BLM and Forest Service personnel and to increase pride in, and commitment to, the stewardship of public lands.

The BLM continues to implement and emphasize the 1987 Memorandum of Understanding (MOU) with U.S. Department of Agriculture agencies for coordinated resource management. The MOU facilitates coordination of resource planning, management, and educational activities with State and local agencies, private landowners, and other publics for development of sound resource management and conservation programs. It also provides for wider application of techniques and procedures developed through the ESP.

In Fiscal Year 1988, the BLM published final rulemaking to implement Executive Order 12548 to establish a permanent grazing fee formula.

The formula consists of a base value of grazing on public lands adjusted by indices reflecting current year land lease rates, cost of production, and beef cattle prices.

Annual increases or decreases of fees will be limited to no more than a 25 percent change from the previous year's fee. The fee will not, however, be lower than \$1.35 per Animal Unit Month (AUM). An AUM is the amount of forage consumed by one cow and one calf, one horse, or five sheep or goats in one month.

About 18,000 livestock operators use lands administered by BLM to supply part of the forage needed by their cattle and sheep each year.

Soil, Water, and Air

Soil, water, and air resource considerations are basic to both the short- and long-term objectives of many other BLM programs. Identification or inventory of existing soil, water, and air resources is the initial step in providing information needed for multiple-use planning and management.

Soil surveys were completed on nearly 4 million acres during Fiscal Year 1988, bringing the total number of acres inventoried to approximately 140 million. The goal is to complete a soil survey on 157 million acres of public rangelands by 1995.

BLM continues to make good progress in reaching the goal for quantifying existing water uses to facilitate water right claims. During Fiscal Year 1988, 4,600 sources were added to data bases used for recording water right filings with the States. Filings were made by BLM to the States for those water sources needed to provide for management of the public lands. Some of the water right filings were made in response to state water basin adjudications.

The completion of 250 watershed improvements in Fiscal Year 1988 provided for reduced erosion and sediment yields, stream-bank and channel stabilization, and salinity control. Maintenance of existing improvements continues as an ongoing effort, with 160 projects being completed in 1988. Approximately 2,600 watershed stations were monitored to assess progress toward meeting soil and water management objectives.

During Fiscal Year 1988, progress was made in implementing the actions outlined in the report to Congress titled *Salinity Control on BLM- Administered Public Lands in the Colorado*

River Basin. The report outlines a comprehensive program for minimizing salt contributions in the Colorado River from lands administered by the BLM. In Fiscal Year 1988, the BLM applied for instream flow appropriation for Beaver Creek National Wild River in Alaska. Field work was completed on instream flow requirements for the Gulkana National Wild River in Alaska.

A wilderness baseline monitoring project was initiated in Fiscal Year 1987 to test and demonstrate monitoring techniques and develop monitoring plans for management of BLM wilderness areas and wilderness study areas. In Fiscal Year 1988, this pilot monitoring effort was extended to include an additional wilderness area with greater diversity. This pilot project will enable development of a monitoring plan format for use in wilderness management plans.

The air resource program supports the operation of more than 28 Remote Area Weather Stations to provide climatic information for use in a wide variety of management activities. BLM's energy and mineral development activities, smoke management, and other programs are aided by the air modeling capabilities of the air resource program. Efforts to assure compliance with new EPA air quality standards for particulates have placed added emphasis on the management of smoke emissions and air modeling.

BLM's air resource program continues to play a key monitoring role in the National Acid Precipitation Assessment by operating 15 acid rain monitoring stations at remote locations in nine western States. As part of the continuing nationwide work in acidic deposition monitoring, the BLM is operating two dry deposition (aerosols, gases) monitoring sites co-located with acid rain stations in Idaho and Wyoming. These stations are part of the National Dry Deposition Network which established 10 stations in the West in Fiscal Year 1988. These stations provide data essential for the development of acid precipitation maps used to determine trends and possible impacts of acidic deposition in the western United States.

Pest Control

Weeds

The BLM participates in cooperative programs with States and counties for the control of noxious weeds on public lands. First

priority is given to control of those infestations that exist on both public and private lands. In Fiscal Year 1988, approximately 200 sites were treated on public lands to control a variety of weed species. The BLM is also a participant in integrated pest (weed) management research.

Grasshoppers

The BLM periodically, in cooperation with the Animal and Plant Health Inspection Service (APHIS), initiates action needed to control grasshoppers and other insects on public lands. APHIS applies control treatments when the levels of infestations become epidemic. In Fiscal Year 1988, less than 100,000 acres were treated. The BLM is an active participant in research to develop integrated pest management techniques for prevention of epidemic infestations.

Riparian Areas

During Fiscal Year 1988, the BLM developed state-specific supplemental guidance; rehabilitated degraded riparian areas; implemented Statewide riparian area management strategies; evaluated management results in demonstration areas; continued to cooperate with private, State, and other Federal entities; and initiated guidelines for the classification of riparian areas.

In Fiscal Year 1988, the BLM also implemented the Riparian Area Management Policy which stresses the interdisciplinary, multi-resource character of riparian area management. This means that all programs — range, watershed, forestry, lands, minerals, etc. — share the responsibility of ensuring that the basic riparian area components of soil, water, and vegetation are taken into consideration when conducting program activities. The policy also serves as guidance to field managers on how to maintain, protect, and improve riparian areas. Most BLM State Offices have developed supplemental riparian policies and all States have prepared riparian management strategies.

Riparian areas are among the most productive and important ecosystems, displaying a unique diversity of plant and wildlife species and vegetation structure. Although these areas comprise less than 1 percent of the 270 million acres of public lands managed by the BLM, they have ecological importance far beyond their relatively small acreage. The BLM

Riparian Task Force Reports are being completed to provide technical guidance to the field for riparian area classification, inventory, monitoring, and management.

There has been increased "riparian consciousness" among BLM resource specialists and managers and public land users through BLM-sponsored workshops and tours. Public information materials on riparian management, including fact sheets, videos, slide shows and displays, have been distributed to field offices. In Fiscal Year 1988, the BLM started implementation of the General Accounting Office's recommendations in the report titled, *Public Rangelands, Some Riparian Areas Restored But Widespread Improvement Will Be Slow*.

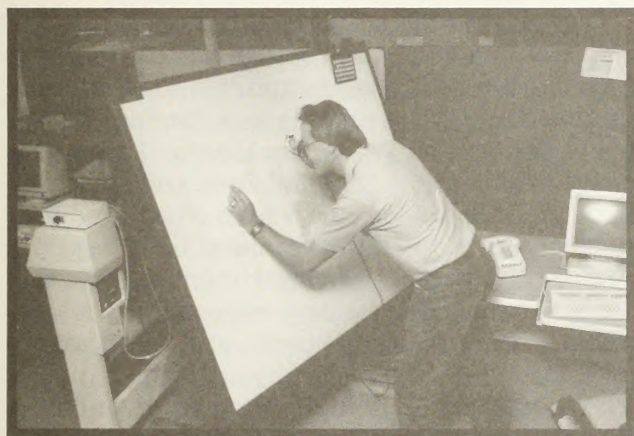
To illustrate the enhancement of riparian areas, each BLM District has established at least one riparian demonstration area, where the best management practices and instream habitat improvement work have been or will be implemented. These areas continued to be monitored in Fiscal Year 1988 and continued to demonstrate the benefits and resiliency of riparian systems to BLM resource specialists and managers, livestock operators, conservation groups and other public land users.

Support Services

Engineering Services

When BLM was established in 1946, it inherited its physical facilities from its parent agencies, the General Land Office and the Grazing Service, along with a primitive road system that reflected the miscellaneous needs of ranchers, mining companies, railroads, and county and State governments. Since the mid-1960s, BLM has constructed numerous roads and trails necessary for administration of the public lands. Where suitable leasable office and other facilities are not available, BLM has constructed its own office buildings, warehouses, shops, and other facilities tailored to the agency's resource management responsibilities.

In Fiscal Year 1988 BLM completed the construction of the new District Office complex in Fairbanks, Alaska. Other projects such as major road maintenance, recreation site work,



and building repair work were also done. In addition, an extensive long-range maintenance inventory and condition survey program was begun in Fiscal Year 1988 and will be continued in Fiscal Year 1989.

BLM provided maintenance to about 140 office buildings; more than 800 other BLM-owned buildings and associated water and sewer systems; approximately 800 developed family unit recreation sites; 5,000 undeveloped (without water) sites; approximately 10,000 miles of roads; more than 1,000 miles of trails; and 30 bridges.

With Fiscal Year 1988 completions, BLM has available 1:100,000 scale surface and subsurface maps providing coverage for most of

the lands administered by BLM. Photogrammetric and remote sensing support was provided by a central office at Denver as well as within each State. Automation of cartographic functions was continued in Fiscal Year 1988 and has become an integral part of BLM's Automated Resource Data System.

Additional support was provided through survey and design of various range improvement and watershed construction projects. BLM continued its dam inventory and hazard assessment programs in Fiscal Year 1988.

Planning

The Federal Land Policy and Management Act, enacted in 1976, provides for the development and maintenance of land use plans for the public lands. Special emphasis is placed on public participation. In 1979, planning regulations (43 CFR Part 1600) were issued establishing resource management plans as the basic planning document. Other legislation containing planning requirements include the National Environmental Policy Act of 1969, the Federal Coal Leasing Amendments Act of 1976, the Surface Mining Control and Reclamation Act of 1977, and the Public Rangelands Improvement Act of 1978.

Planning helps the local BLM manager, public land users, and others resolve resource management conflicts and land use issues. BLM seeks to improve resource management decisions on the public lands through a planning process that includes participation by the public and Federal, State and local governments; use of the best available data; and analysis of alternatives. Resource management plans are designed to guide and control management actions relating to the increasingly competitive demands for public lands, while at the same time protecting and ensuring their long-term productivity.

Fifty-four resource management plans had been approved by the end of Fiscal Year 1988. An additional 10 plans were in final form and awaiting State Director approval, while 6 plans were in draft form and available for public review. BLM also issued draft plans for nonmilitary uses of four military withdrawals that were extended by Congress in 1986. With 54 plans completed, BLM is placing increased

emphasis on plan implementation, monitoring, and maintenance. In Fiscal Year 1988, the BLM Phoenix Training Center twice offered the "Using the Plan" training course.

Areas of Critical Environmental Concern

The FLPMA requires that BLM give priority to the designation and protection of areas of critical environmental concern (ACEC). Such areas are designated to protect and prevent irreparable damage to important historic, cultural, or scenic values; fish and wildlife resources or other natural systems or processes; or to identify natural hazards. Natural areas may also be designated under FLPMA to maintain natural diversity and provide for scientific research.

Areas of critical environmental concern are identified through BLM's planning process. Appropriate management prescriptions for each area are developed and tailored to reflect the site-specific resources and local circumstances. Protection of the identified values is ensured whenever subsequent uses are undertaken or authorized.

During Fiscal Year 1988, 67 ACEC designations were made. This raised the amount of public land accorded designation to more than 5.3 million acres and reflected BLM's vigorous commitment to the appropriate use of this designation and management authority. A new manual to aid the identification, evaluation, and designation of ACECs was issued in September 1988. The new manual, based on an earlier public and Bureauwide review of proposed revisions, completed an effort to improve BLM's existing ACEC guidance.

Fire

Fire has always been a part of the natural environment. With that in mind, BLM sees fire from two different aspects -- wildfires that cause negative impacts and must be suppressed and prescribed fires that can be used to achieve positive resource management objectives. In a change from the days of total wildfire exclusion on public lands, BLM today uses fire as a major tool in accomplishing multiple-use objectives, while totally suppressing only the damaging and unwanted wildfires.

BLM is responsible for fire management on more than 380 million acres of Federal and nonfederal lands in the 11 western States and

Alaska. The fire program also continues to develop new technology in group equipment, aircraft, and computers.

In addition, BLM manages the Boise Interagency Fire Center in Idaho. This is the national fire support center, providing support to agencies of the Departments of Interior and Agriculture, and to the Department of State (for assistance to foreign countries), as well as to State governments.

During Fiscal Year 1988, 3,078 wildfires were recorded either on, or threatening BLM-administered land. This number far exceeds the normal annual average of 2,350 wildfires. But the acreage burned, 295,000 acres, was just over one-quarter of the 1 million acres burned in an average year.

The 1988 fire season was characterized by the fourth year of drought in many areas of the western United States. As early as May, provisions were made to increase firefighting capabilities in Arizona, California, and Oregon. By the middle of June, it was apparent that the West was in for another severe fire season, perhaps exceeding severity of any of the three previous seasons.

Sparked by lightning and human activities, extremely large fires spread across portions of Alaska, Oregon, Washington, Idaho, Montana, and Wyoming. Most notable was the complex of fires in the Greater Yellowstone Area. Large areas of Yellowstone National Park and surrounding National Forests were burned, and the public outcry led to a full review of both Department of the Interior and Department of Agriculture fire management policy, especially as it applies to fire in national parks and wilderness areas.

Mobilization of firefighting crews and other resources again exceeded any prior records. The suppression effort involved personnel from nearly all States and Canada. At the peak, nearly 30,000 firefighters fought the many wildfire complexes. Military troops were used on several fires in both Yellowstone Park and on National Forest lands adjacent to the Park.

The Boise Interagency Fire Center also had a record year in 1988, providing support to suppression efforts on 1,700 wildfires. The Fire Center moved record numbers of personnel and tons of supplies and equipment in support of these fires. In addition, the Fire Center coordinated the training and use of eight battalions of regular military troops in support of the Greater Yellowstone Area fire complex. Unlike the previous year, the support demands were steady throughout the fire season, covering nearly 150

days. Safety continues to be a very high profile program in the firefighting business. During 1988, the National Fire Protection Association released figures showing firefighting as the most hazardous occupation in the nation and wildland firefighting as the most dangerous type. Despite two fatalities of BLM employees on other agency fires, the overall safety record for 1988 was outstanding.

BLM continued participation in the National Wildland/Urban Interface Initiative during Fiscal Year 1988. The Initiative is sponsored by the Department of the Interior (through BLM), U.S. Forest Service, National Fire Protection Association, and U.S. Fire Administration. The increase in construction of homes in and near wildlands has become a very important factor in wildland firefighting. When wildfire strikes, the priority becomes protection of private buildings instead of public resources, such as timber, grazing lands, and recreation areas. While the mission of Federal wildland firefighters is to protect wildland resources, they are increasingly forced to sacrifice control of a wildfire to defend homes.

Reduction of fire hazards in this setting requires more than just individual action by homeowners to reduce fire hazards on their own property, although that is a very important goal of the Initiative. It also depends on the co-operation of a variety of entities, including county zoning departments, architects, real estate agencies, and insurance companies. The purpose of the National Wildland/Urban Interface Initiative is to increase community awareness of the inherent wildfire hazards attached to living in or adjacent to the wildlands, and to work toward making the changes that could resolve these problems.

Significant progress also occurred during Fiscal Year 1988 in the area of communications and automated data systems. BLM continued to develop the Initial Attack Management System (IAMS), and enhanced the network of Remote Automated Weather Stations throughout the West.

Prescribed fire use in BLM decreased significantly in Fiscal Year 1988, partially due to the severe burning conditions encountered. There were 582 projects completed that burned 53,344 acres. As is normal, the majority of the activity, more than 460 projects, was in support of forestry management in western Oregon. Of the acreage burned, 16,000 acres were burned to accomplish forest improvements, 18,000 acres were burned for range improvements, and 15,000 acres were burned to benefit wildlife.

Fire rehabilitation costs on damaged soil/watershed areas were \$7.42 million, distributed among 54 projects. These fire rehabilitation efforts included reseeding of grasses or shrubs, construction of protective fences or dams, and installation of culverts and other drainage devices.

Aviation

During Fiscal Year 1988, the natural resource programs in the BLM accumulated over 38,000 hours of flight time at a cost of more than \$30 million. More than 90 percent of BLM aircraft services were provided through contracts with the private sector.

During Fiscal Year 1988, an aviation safety and accident prevention planning process was given top priority, along with an effort to plan and develop a wide range of new training courses and materials. BLM experienced only one serious accident during the year. A helicopter was destroyed while herding horses, but the crew suffered only minor injuries.

Law Enforcement and Resource Protection

Areas of enforcement that have received particular emphasis since establishment of the law enforcement program in 1976 include investigation and eradication of cannabis cultivation; prevention of theft, destruction, and sale of protected archaeological resources from public lands; investigation of oil and gas theft; and wild horse and burro violations.

Since the passage of the Federal Land Policy and Management Act of 1976, BLM initiated a law enforcement and resource protection operations program that utilizes special agents and law enforcement rangers, all well trained in law enforcement, to enforce laws pertaining to the public lands and their resources.

Where appropriate, law enforcement agreements with local officials are also used to enforce laws or ordinances of the respective State or subdivision upon public lands. BLM law enforcement officers perform a full spectrum of patrol and investigative duties and are authorized to enforce all Federal laws and regulations pertaining to use, management, and development of the public lands and their resources.

During Fiscal Year 1988, BLM special agents and law enforcement rangers continued

efforts with other Federal, State, and local agencies to eradicate cannabis on public lands in California, Oregon, and other western States. BLM also increased its efforts to enforce the Archaeological Resources Protection Act of 1979 by emphasizing the investigation of destruction, theft, and sale of archaeological artifacts.

Cadastral Survey

As established by law, BLM's Cadastral Surveying Division has the ultimate responsibility for all of public and boundary surveying. Its work extends beyond the survey and resurvey of public lands, authority for which goes back to the Land Ordinance of 1785. With perfecting changes, its rectangular principles were enacted into law under the Constitution in the Public Lands Act of 1796 and have been carried forward to 43 USC 751. Consequently, there is a nationwide dimension to BLM cadastral surveying. Its crews are in the field from Florida to Maine, from Maine to California, and from California to Alaska. BLM's cadastral surveyors continue to introduce changes in their ancient art to take advantage of emerging technology.

BLM maintains all official Public Land Survey System records covering 30 States. Because private surveyors are constantly making resurveys and subdivisional surveys, these records are in steady demand as the basis for the new surveying, even in States which have long since ceased to be public lands States.

Field accomplishments during Fiscal Year 1988 include surveying 6.3 million acres, of which 5.6 million acres were original surveys and 700,000 acres were resurveyed. Ninety-nine percent of the original surveys were Alaska statehood grants or Alaska Native Claims grants; the remainder were mostly public lands and Indian lands. The resurveyed acres were principally public lands and National Forest lands, but included Indian lands and Federal reclamation lands.

To provide on-the-ground identification and to yield simple, precise descriptions for legal records for the 6.3 million acres, BLM surveyors ran 11,846 miles of survey lines, marked them with 15,138 monuments, and filed 1,300 sets of plats and field notes, the definitive legal record of the surveys. In Alaska, one-third of the original surveys and many special surveys were contracted to private survey firms. BLM directed the work and approved the plats and field notes after ascer-

taining that the survey was done in accordance with the Manual of Surveying Instructions, 1973.

The Public Land Survey System/Geographic Coordinate Data Base (PLSS/GCDB) is being designed and tested in the New Mexico State Office. A 100-township test block is being used and contains varied types of surveys including rectangular surveys, Spanish Land Grants, Mining Claims, and Small Holding Claims. Methods and procedures for a data collection contract will be a product of the test site. The contract project is expected to cost about \$15 million.

BLM's Cadastral Surveying Division is continuing to cooperate with New Mexico State University in the development of a 4-year course in land surveying. Under an Intergovernmental Personnel Act agreement, a senior BLM Spanish-speaking geodesist is assisting the university faculty in formulating a 4-year course in land surveying. Completing such a course will soon be required for future professional accreditation in New Mexico.

Efforts are underway to automate the collection of field survey data for direct entry



into the automated plat and field note preparation system. It is expected that this effort will reduce the number of errors inherent in the current manual system, thereby increasing productivity.

Volunteers and Other Contributed Services

In 1988, for the first time, BLM had more volunteers than employees. The BLM's 10,810 employees were assisted by 14,077 volunteers. This was 56 percent more than the 8,994 volunteers who worked with the BLM in 1987.

Other statistics for Fiscal Year 1988 include:

- *Citizen volunteers contributed 583,351 hours of work, 13 percent more than in 1987.*
- *Their contributed services were valued by BLM's field managers at \$5.5 million, 11 percent more than for 1987.*
- *Associated costs to the Government were estimated at \$558,568 — indicating a benefits-to-costs relationship of 9 to 1.*
- *On the average, each volunteer worked 41 hours. One out of three was female; 10 percent were more than 55 years old, and 30 percent were under 18 years of age.*

Volunteers serve BLM in many diverse ways. For example, they improve habitat for fish and wildlife; assist recreational visitors to the public lands by serving as trail guides and river rangers; build or maintain trails and campgrounds; improve range and forestland by planting trees and other vegetation; conserve soil and water resources by improving watersheds; do mapping, research and other tasks to support mineral and energy planning and development, and assist with administrative support by operating computers and other office equipment.

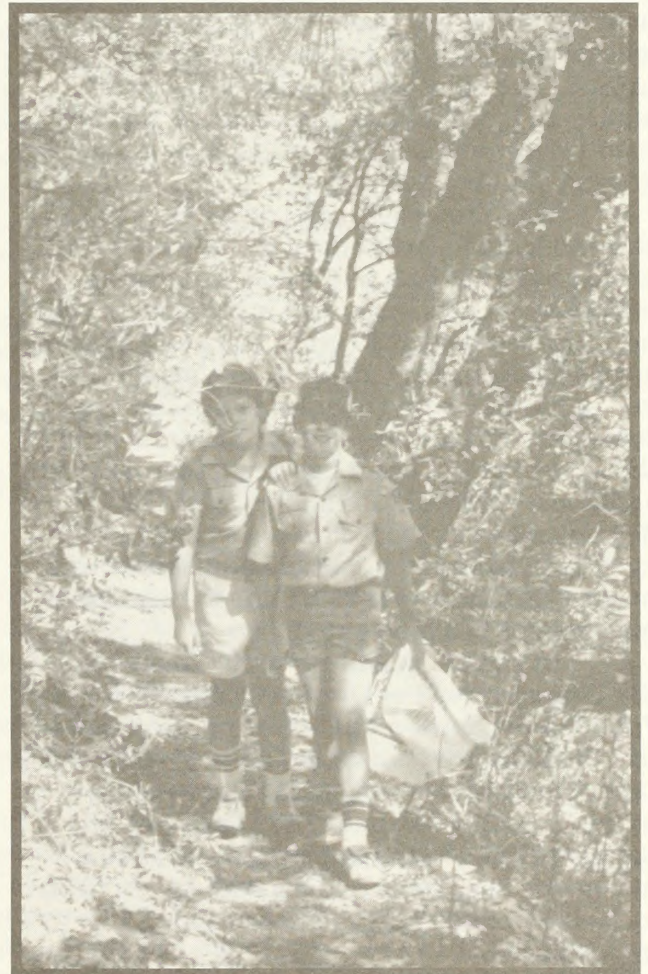
Examples of volunteer activities in Fiscal Year 1988 include:

In Alaska, Diana Gansemer displayed initiative and enthusiasm when she transformed an empty building north of the Arctic Circle into a hospitable visitor center. The center, located in the town of Coldfoot on the Dalton Highway, can be reached by traveling on the 600 miles of gravel road running north from

Fairbanks to Prudhoe Bay. In its first summer season, the facility attracted more than 700 visitors.

Visitors enjoyed Gansemer's slide-show on northern Alaska history, recreation attractions and fragile natural resources, as well as her walking tour of gold miners' 80-year-old cabins. As a result of her demonstration of the value of this remote visitor center, in 1989 it will be operated by three federal agencies -- BLM, National Park Service and Fish and Wildlife Service. Gansemer will continue to volunteer at the center as BLM's representative.

In New Mexico, James Gillham, a petroleum engineer and retired BLM and U.S. Geological Survey employee, reviewed approximately 5,000 rights-of-way across public land and converted relevant data into a new automated billing system for the Roswell District. He also abstracted information from oil and gas agreements and contracts for entry into an automated case-recording system. BLM's Roswell District Manager estimated the value of Gillham's contributed service at \$35,000.



In Nevada, Nicholas Williams worked as a multiple-purpose volunteer for the Tonopah Resource Area. In addition to operating the Area's word processor and mobile radio station, and assisting the mineral program, he mapped 14 mountain-top communication sites with compass and chain survey, and maintained 13 remote water guzzlers that catch and store water for chukar partridge and desert bighorn sheep. His timely discovery and repair of a defective guzzler was credited with saving a herd of bighorn sheep.

In Idaho, the volunteer services of 19 Native Americans and University of Colorado anthropologist Deward Walker made it possible for BLM to begin to appropriately manage a long-neglected site known as Chief Tendoy Cemetery, in BLM's Lemhi Resource Area in east-central Idaho.

Long used by members of the Lemhi Shoshone Tribe to bury their dead, the site was set aside by the U.S. Government for protection as an "Indian burying ground" in 1907 when the Government forced the tribe to move to a reservation 200 miles away. The 40-acre site includes the grave of Chief Tendoy — a descendant of Sacajawea, the Lemhi Shoshone woman who guided Lewis and Clark through this region in 1805. In recent years the area has been subjected to vandalism and unauthorized off-road-vehicle use, hunter access, farming, cattle grazing, and trash dumping.

The volunteers took tribal elders to the site and learned locations of graves and associated tribal traditions and values. Walker advised both BLM officials and tribal leaders, who have known him for 20 years and trust him. As a consequence, BLM adopted, in consultation and agreement with tribal leaders, a cultural resource management plan for the area. Now, the site is fenced, trash has been removed (with additional volunteer assistance from Boy Scouts and other local citizens), vehicle tracks have been blocked by barriers and seeded with native vegetation, and historical and memorial markers are being prepared.

In Oregon, members of the Dean Creek Elk Committee of the Oregon Wildlife Heritage Foundation contributed 18,500 hours of volunteer work toward completion of BLM's 923-acre Dean Creek Elk Viewing Area near Reedsport, in the Coos Bay District. They produced and presented video tapes and other educational materials which helped to educate citizens and local, State, and Federal officials about the area's potential.



In addition, they raised \$85,000 in public donations to help pay for construction of an interpretive center for visitors by sponsoring dinners and auctions, and selling "Join-the-Herd" T-shirts, caps, and buttons. Upon completion of the interpretive center, adjacent to the fenced viewing area of meadow and wetland, visitors may observe not only a herd of 100 or so Roosevelt elk, but bald eagles, osprey, and other species of coastal Oregon wildlife.

In Utah, 20 high school students wrestled with rock, wire mesh, steel posts, bailed straw and filter fabric as they built 150 structures to reduce soil erosion in streams and gulleys. The structures, called gabions, dissipate the erosion energy of flowing water and retain soil. The students, members of South Sevier High School's Future Farmers of America chapter, worked under the supervision of their vocational agriculture teacher, Larry Coombs. Coombs used the watershed improvement program of BLM's Richfield District as a basis for this learn-as-you-sweat project, as well as for related instruction in environmental education and land management.

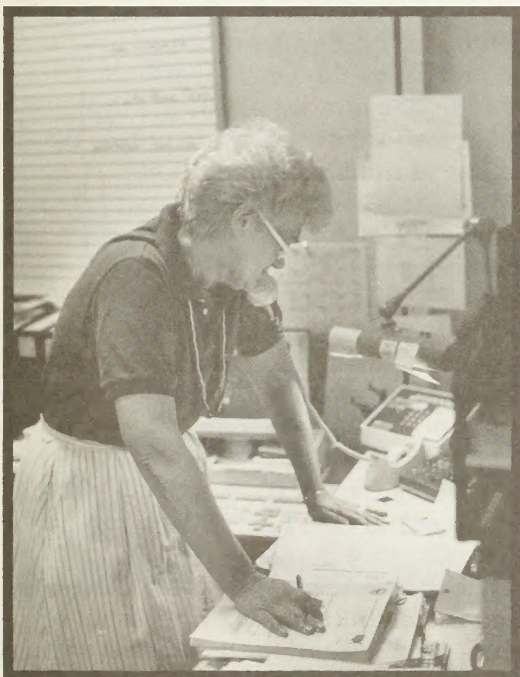
In California, Ann and Douglas Chadwick conducted botanical surveys of the Carrizo Plain that will be a basis for management of this isolated part of the San Joaquin Valley. The area has been called a North American version of East Africa's Serengeti. In a stark landscape that appears sterile with little diversity, the Chadwicks located more than 200 species of plants, including rare, threatened and endangered species.

Through an alliance with the Nature Conservancy, National Audubon Society, California Department of Fish and Game, San Luis Obispo County, Chevron and Santa Fe oil companies, U.S. Fish and Wildlife Service, and

the BLM, the 8-mile-wide, 50-mile-long basin of arid scrub and grassland is to be cooperately managed as a mixed public-private ownership complex known as the Carrizo Natural Heritage Reserve. Under sensitive production controls, the oil companies will be able to operate wells as pronghorn antelope and tule elk are restored to an area that already is home to California's largest and most diverse concentration of rare and endangered vertebrate species.

The Chadwick's plant lists — the first detailed description of the botanical resources of five study sites in BLM's Elkhorn Plain Area of Critical Environmental Concern, and at Soda Lake, a natural alkali wetland — will provide baseline information for long-term management of habitat for endangered species of both plants and animals.

In Colorado, five citizens completed an unusual 2-year volunteer project assisting BLM in developing a plan for interim management of the Gunnison Gorge, a dramatic river corridor being considered for designation as a National Wild and Scenic River and wilderness area. Before they went to work, this was considered by some BLM officials to be the agency's most controversial river planning project. The resulting plan, BLM's first in Colorado to include outfitter and private-boater allocations, now has another distinction as well — after its adoption, the agency received no letters of protest or appeals.



The volunteers' assignment included determining the corridor's carrying capacity for recreational visitors; defining management actions required to limit use to this amount, and proposing other actions that would allow primitive and semi-primitive public uses while maintaining natural resources of the gorge and tributary canyons in an essentially unmodified condition pending decisions by Congress on wilderness and wild-river designations. The area's inhabitants include river otter, brown and rainbow trout, deer, elk, and bighorn sheep.

The five volunteers — Richard Baker, representing the general public; Joel Evans, fishing public; Jerry Mallett, commercial river outfitters; Carol Taylor, private river runners; and Fred Wetlaufer, conservation groups — are continuing to assist BLM's Uncompahgre Basin Resource Area in the Montrose District in carrying out the plan.

Hosted Workers

BLM employees also recruit "hosted workers," or people who do work for BLM for which they are paid wages by an entity other than BLM. One example of such a program is the Senior Community Service Employment Program, a Federal-State program through which low-income older persons can work for public or community service organizations and be trained on the job while paid minimum wage.

In Fiscal Year 1988, BLM's field managers were assisted by 1,099 hosted workers, who served 315,145 hours and accomplished work valued at \$2.6 million. Incidental costs to BLM were estimated at \$138,191.

Information Resources

Within BLM, Information Resources Management (IRM) includes automated data processing (ADP), telecommunications, records and information security. IRM is currently involved with rapidly growing technology and equally increasing demands for automation to support public lands' resources management.

BLM is acquiring additional computer resources to support its State Office minicomputers and the mainframe computer in Denver, Colorado. More than 65 PRIME minicomputer systems in State, District, and Resource Areas and over 2,200 microcomputers Bureauwide are bolstering BLM's evolving automation

efforts. Graphics applications, both for Geographic Information Systems (GIS) and business purposes, have expanded at an astonishing rate.

By the end of Fiscal Year 1988, BLM had completed an Information Systems Review for 11 States, the Service Center in Denver and the Boise Interagency Fire Center.

ADP and information security is of growing concern to BLM. With the passage of the Federal Computer Security Act of 1987, BLM began developing a comprehensive Information Security Program. This includes protecting the Bureau's data from unauthorized access and developing security plans for sensitive systems.

In telecommunications, the BLM reduced its subscription to consolidated telephone service, provided in major metropolitan areas by the General Services Administration, in favor of BLM-owned and maintained system. The change resulted in \$1.7 million savings during Fiscal Year 1988, with a projected savings of \$3.1 million dollars over the next 10 years.

In Fiscal Year 1988, BLM and the National Archives and Records Administration developed a new method for cross-referencing land patent case files, so that public researchers will know that updated information concerning an original patent exists in BLM. In addition, BLM issued a new records retention and disposition schedule. This schedule lists all known categories of BLM records, where they are located, on what media they exist, whether they are permanent or temporary and how long they are to be maintained.

One innovative means to improve BLM's IRM operations, together with its technical expertise, is a new IRM Trainee program, conceived in 1987. At the completion of the program, participants will have acquired the skills necessary to successfully manage all the technical IRM disciplines required at the State Office, Service Center, Boise Interagency Center IRM Branch level, or the Washington Office staff level. Two trainees were selected during Fiscal Year 1988 at approximately 6 month intervals.

BLM further refined its Land Information System (LIS) concept during Fiscal Year 1988, to ensure that separate users of automated records, resources, and geographic coordinates data share information and join in common development efforts toward a Target System. BLM also expanded coordination efforts with other Federal agencies, State and

local governments, industry and public interest groups in Fiscal Year 1988 to increase understanding of how BLM's automated data can be used by others.

BLM's Modernization study was completed in Fiscal Year 1988 and incorporated into a target system contract that will be issued in mid-1989 and awarded in mid-1990. The contract will include the Automated Land and Mineral Leasing System (ALMRS).

Automated Land and Mineral Record System (ALMRS)

A basic BLM responsibility for the last 200 years has been the maintenance of the land and mineral records for the public lands. These official documents are the basis for the legal authorizations to use the public lands, including thousands of applications annually for oil and gas leases and rights-of-way.

BLM is now automating access to the information on these records, replacing hand-drawn plats and procedures that, in some offices, date back to the beginning of the country.

Implementing the Automated Lands and Minerals Records System (ALMRS) is a major effort. BLM maintains more than 250,000 cubic feet of records, 1 billion documents on paper. The demand for use of the public lands continues to grow and has exceeded the capacity of the manual forms and procedures used for many years.

ALMRS, when fully implemented in Fiscal Years 1992-93, will automate much of the case processing and will greatly improve responses to public queries about the availability of public lands for particular purposes, including the filing of mining claims.

Because ALMRS will significantly increase efficiency by implementing modern business practices in BLM, it is a cost-effective investment. Benefits total more than \$850 million through the system's life cycle, with the additional costs being approximately \$150 million to implement an automated system rather than perpetuate the paper-based operations. The alternative to automation would involve retracing tens of thousands of plats, which alone would cost \$30 million and provide no greater efficiency.

During Fiscal Year 1988, BLM largely completed the definition of its functional requirements for automating the records management process. This is a critical accomplishment, since BLM plans to obtain the computer

capabilities through a competitive procurement planned for issuance in Fiscal Year 1990 and vendors will have to know in some detail what capabilities are required.

BLM adopted a procurement strategy in late Fiscal Year 1987, after detailed discussions with the vendor community, to "bundle" into one contract the purchase of ALMRS hardware and software to increase the potential efficiency of the system. Emphasis on actual data administration and data base management was increased in Fiscal Year 1988 to ensure a verified data base would be operational when the software and hardware were completed.

BLM is relying upon the standard, proven analytical approaches to developing automated systems, where the needs are well-documented and the alternative management choices are made through the life-cycle man-

agement process. To ensure the analysis matches the real-world concerns in various offices, BLM also uses prototyping of portions of the planned system and is piloting computerized applications and data base operations in field offices in New Mexico.

While the delivery of operational ALMRS computers in every BLM office is still several years away, BLM has already created an automated data base of legal land descriptions (based on the Cadastral Surveys) for nearly all the western States. It has also completed automating the land status in Alaska, New Mexico, and Arizona. BLM has initiated similar data collection efforts in Montana, Idaho, Utah, and Nevada. Because of the quantity of data to be automated, collection of status data will require several years.



General Administration

Management and Productivity Initiatives

During Fiscal Year 1988, the BLM continued several initiatives designed to improve the productivity of its programs and employees. A Bureauwide productivity improvement plan using a "Total Bureau" program emphasis entered its second year. The plan's goal is to improve the quality of programs and services. With this in mind, the BLM initiated development of quality and timeliness measures and standards in Fiscal Year 1988. The goal is to establish practical, measurable criteria to help the BLM determine whether it is improving the quality of our products and public services.

On October 1, 1987, the BLM implemented its Productivity Pilot Project, a 3-year program to improve the quality of worklife for employees, establish a more active organization, create more responsive resource management, improve the quality of work and improve productivity. Four BLM districts, Susanville, California; Butte, Montana; Roswell, New Mexico; and Rock Springs, Wyoming, were selected from a list of nominations based on the existing variety of resource management conditions, strong motivational characteristics, and

ability to support a significant pilot program. The pilot project allows local managers to set priorities in conjunction with the Department of the Interior, BLM, and State priorities, and to do things because they make sense. The project has the potential to reduce unnecessary procedures and tasks. Successful initiatives that have potential for Bureauwide application will be recommended to the Bureau Management Team for consideration.

The BLM participated in the Secretary of the Interior's first annual Productivity Enhancement Funding program in Fiscal Year 1988. The program was initiated to provide a way for field level personnel to recommend ways to improve productivity throughout the Department of the Interior. Seed money is provided to local offices to try new and innovative ways to accomplish tasks. Seven of the 21 Fiscal Year 1988 proposals approved by the Department of the Interior were submitted by the BLM. The BLM will be an active participant in this program in Fiscal Year 1989.

Procurement

During Fiscal Year 1988, BLM spent \$146 million for goods and services. This includes \$103 million for 650 contracts in

Socioeconomic Procurement Programs

<i>Category</i>	<i>Goal (\$000)</i>	<i>Actual (\$000)</i>
Awards to Small Business	47,630	86,032
Awards to 8(a) Firms	1,400	4,293
Awards to Minority Businesses (including 8[a])	3,500	7,504
Awards to Women-Owned Business	1,750	4,322
Setasides for Labor		
Surplus Area Concerns	10,500	51,678
Total	64,780	153,829

excess of \$25,000, and \$43 million for 39,000 small purchases of \$25,000 or less. In addition, BLM operated a test using bankcards for small purchases. Field employees completed 11,000 transactions worth \$1,615,000 using 700 cards. This technique reduces paperwork, permits over-the-counter transactions and guarantees the vendor fast payment.

BLM continues to exceed its goals in various socioeconomic procurement programs, as the following table shows.

The Bureau completed development of requirements for an automated procurement system to automate all procurement operations, from requisition to close-out, produce necessary reports, and interface with Financial Management and Property systems. In Fiscal Year 1989, BLM will query the market-place to determine if software exists to fill its needs. Cost/benefit analyses of all available alternatives will be completed and recommendations for development made to management.

Property Management

In Fiscal Year 1987, BLM was asked by the Department of the Interior to develop a fleet management information system, gather data from the Bureaus regarding utilization of its vehicle fleet, and meet the requirements of P.L. 99-272, Subpart C. That system is operational and BLM is providing reports to the Department.

Development of user requirements for an automated stores warehousing system was begun in Fiscal Year 1988 and will be completed in Fiscal Year 1989. Development in Fiscal Year 1990 is anticipated.

BLM implemented the General Service Administration's Generic Real Property System for automated reporting on Federal holdings of real property.

Uniforms

To improve the public's identification with BLM and its objectives, improve BLM's overall image and to promote esprit de corps among BLM employees and volunteers, a national uniform contract was awarded to Lion Apparel of Dayton, Ohio, in December 1987. A catalog depicting the full range of current dress, field and work components is available to BLM employees and volunteers. The program was launched in May 1988, and by the end of Fiscal Year 1988, approximately 2,500 employees had

ordered uniform components. Initial reaction to this program by employees and the public has been good. A National Uniform Committee has been established to strive to improve comfort and fit, add other needed components, and promote proper wearing of components.

Directives Reviews

A general management evaluation of the Washington Headquarters office pointed out the need to make the BLM Manual system a more current and reliable source of guidance and direction to the field. The Branch of Directives Management developed instructions and criteria, under which Headquarters divisions reviewed all existing manuals, assessed their condition, and developed priorities in Fiscal Year 1989 and beyond for accomplishing necessary revisions. This is a first step in a long-term effort to improve the content of the BLM manual system.

Personnel Management

BLM's Division of Personnel in the Washington Office concentrated much of its efforts on developing personnel policies in connection with streamlining of personnel services, career development programs, and major position classification issues during Fiscal Year 1988.

In an effort to improve productivity through maximum use of human resources, BLM is continuing the implementation of its career program. The program has six major components: New Employee Orientation, Employee Excellence, BLM Careerists Professional Development, Management and Leadership and Advanced Leadership. The first two components are geared to all employees at the beginning and early stages of their careers and are designed to build an understanding of and commitment to BLM's mission and their role in that mission. The final four components focus on identifying and developing both a reserve of technological expertise and a body of high-potential future managers and leaders.

During Fiscal Year 1988, BLM employed nearly 10,000 individuals. Continued emphasis was placed on position management and position classification throughout BLM. Primary emphasis was placed on classification of positions related to the Bureau's evolving functions in the agency's Land and Information System and modernization efforts.

Financial Management

Appropriations and Expenditures

BLM programs are funded through six major operating appropriations, several minor permanent and trust appropriations, and reimbursements from other Federal agencies for work performed on their behalf. In addition, the BLM budget includes one annual appropriation and numerous permanent appropriations that provide funds to State and local governments in which Federal land resources are located, either as payments in lieu of taxes or as shared revenues from the sale, leasing and disposition of resource commodities.

BLM Funding				
Fiscal Year	1985	1986	1987	1988
		<i>(in millions)</i>		
BLM Operating Appropriations	\$ 480.0	457.8	577.1	593.7
Payments-in-Lieu of Taxes	103.0	99.9	105.0	105.0
Permanent Payments to States	141.0	12.4	81.4	156.4
Other Miscellaneous	4.8	4.7	5.9	7.3
TOTALS:	\$728.8	574.8	769.4	862.4

Funding and obligation data on a program-by-program basis for BLM's principal operating accounts for Fiscal Years 1987, 1988 and 1989 are as follows:

Management of Lands and Resources

	FY 1987 * Actual	FY 1988 * Actual (in thousands)	FY 1989 Enacted
Energy and Minerals Programs (Oil & Gas, Coal, Mining Law Administration, etc.)			
Appropriation	78,482	80,620	74,297
Obligation	77,556	80,378	74,297
Work Years	1,127	1,714	1,682
Lands, Realty and Rights-of-Way			
Appropriation	39,603	46,787	36,729
Obligation	39,128	46,740	36,729
Work Years	995	892	859
Forest Management			
Appropriation	6,105	7,281	6,685
Obligation	5,883	7,252	6,685
Work Years	128	127	127
Wild Horses & Burros			
Appropriation	17,787	15,485	14,560
Obligation	17,771	15,470	14,560
Work Years	0	152	145
Grazing Management			
Appropriation	31,467	33,426	34,600
Obligation	30,724	33,393	34,600
Work Years	909	771	800
Soil, Water and Air			
Appropriation	13,316	13,879	14,741
Obligation	13,002	13,865	14,741
Work Years	262	237	262

Management of Lands and Resources

	FY 1987 * Actual	FY 1988 * Actual (in thousands)	FY 1989 Enacted
Wildlife and Fish Habitat Management			
Appropriation	16,013	14,153	19,985
Obligation	15,864	14,139	19,985
Work Years	323	327	362
Recreation Management Recreation, Cultural & Wilderness Resources)			
Appropriation	22,891	23,637	25,160
Obligation	22,587	23,613	25,160
Work Years	472	476	513
Resource Management Planning			
Appropriation	9,283	9,465	9,289
Obligation	9,178	9,337	9,289
Work Years	198	182	180
Information & Resource Data Management (Information Systems, ALMRS, Resource Data Acquisition)			
Appropriation	20,724	21,004	43,060
Obligation	20,598	20,983	43,060
Work Years	243	419	519
Maintenance (Fire Management, Cadastral Surveys, Resource Protection/ Law Enforcement, Hazardous Materials Mgmt.)			
Appropriation	55,729	61,668	69,101
Obligation	54,704	61,212	69,101
Work Years	826	864	921

Management of Lands and Resources

	FY 1987 * Actual	FY 1988 * Actual (in thousands)	FY 1989 Enacted
Emergency Operations (Fire Presuppression and Firefighting, Fire Rehabilitation, Grasshopper/Mormon Cricket Control)			
Appropriation	90,976	105,598	72,876
Obligation	90,785	104,753	72,876
Work Years	779	1,031	820
General Administration			
Appropriation	87,807	88,324	87,649
Obligation	89,361	88,236	87,649
Work Years	1,112	1,079	1,126

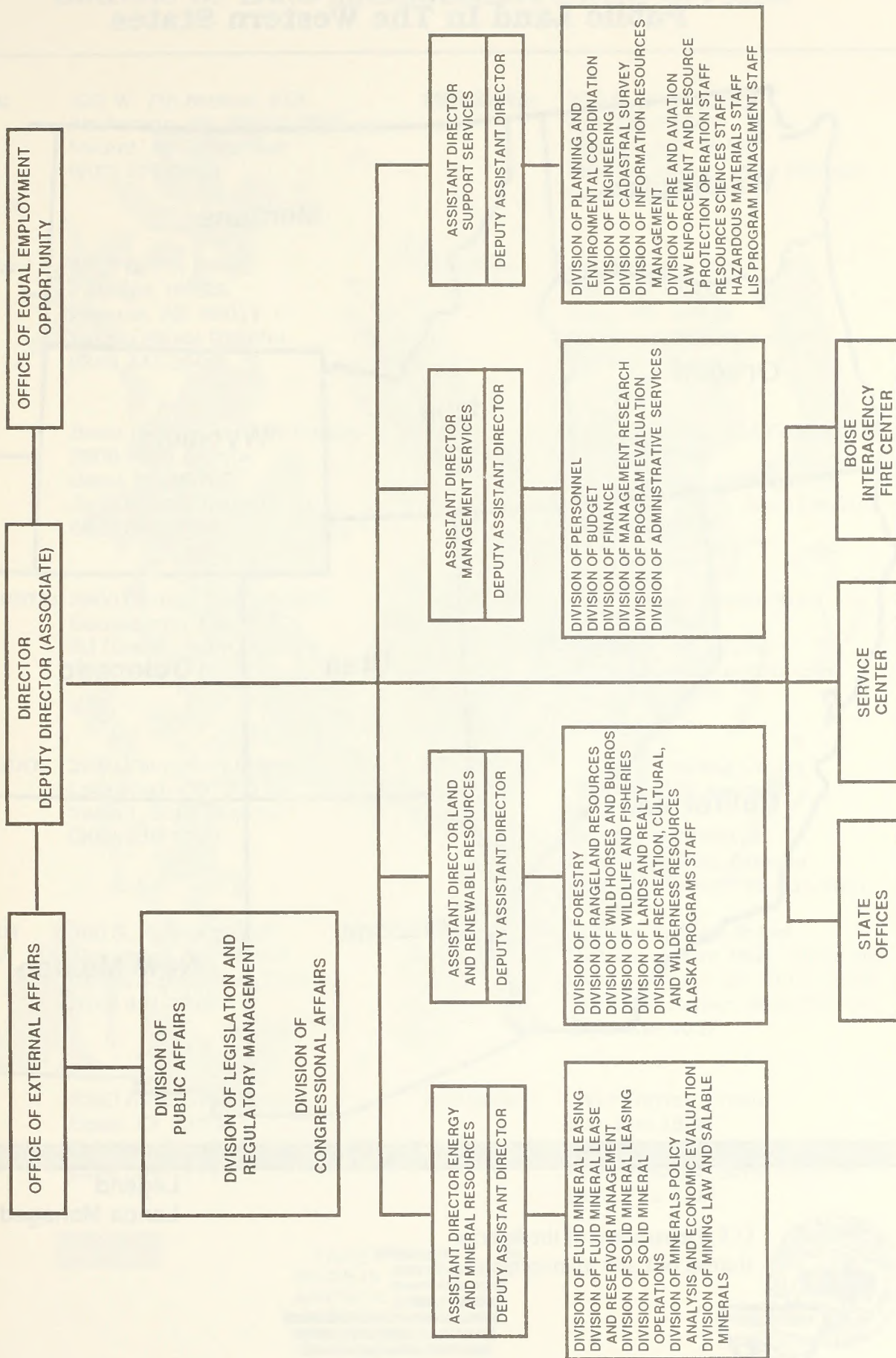
* Appropriation amounts shown for FY 1987 and FY 1988 have been adjusted for comparability to reflect the revision of the Bureau's budget structure which took effect in FY 1989.

O&C Grant Lands

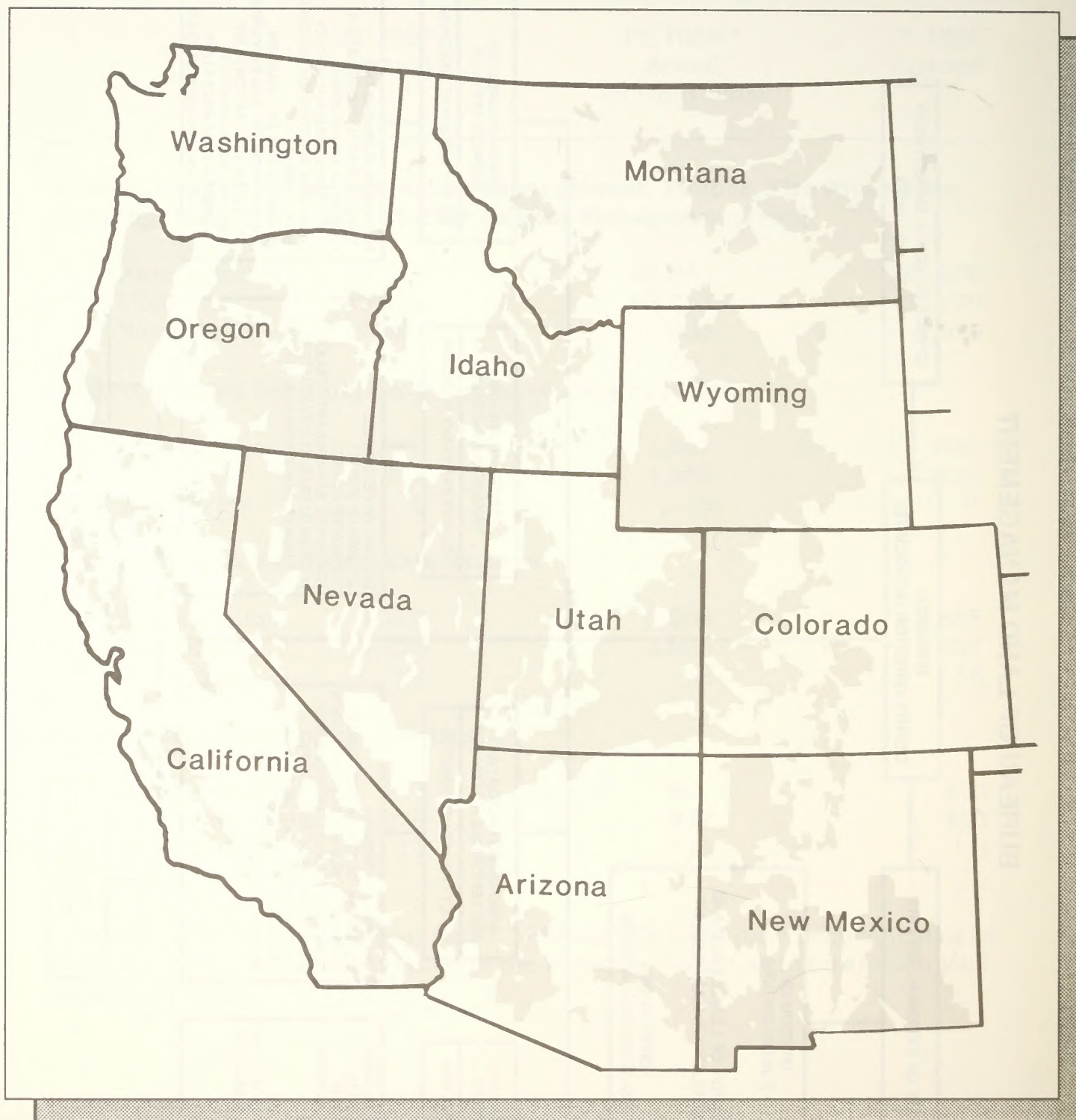
	FY 1987 * Actual	FY 1988 * Actual (in thousands)	FY 1989 Enacted
Western Oregon Resources Management (Forest, Timber, Fire Protection, Planning, Soil/Water/Air, Wildlife Habitat Management, etc.)			
Appropriation	51,305	53,841	55,270
Obligation	49,414	53,733	55,270
Work Years	961	991	1,030
Western Oregon Information & Resource Data Systems			
Appropriation	710	1,367	625
Obligation	462	1,356	625
Work Years	9	9	9
Western Oregon Facilities Maintenance			
Appropriation	4,176	3,909	3,655
Obligation	4,120	3,835	3,655
Work Years	62	56	56
O&C Construction and Acquisition			
Appropriation	541	881	450
Obligation	528	857	450
Work Years	11	11	9

* Appropriation amounts shown for FY 1987 and FY 1988 have been adjusted for comparability to reflect the revision of the Bureau's budget structure which took effect in FY 1989.

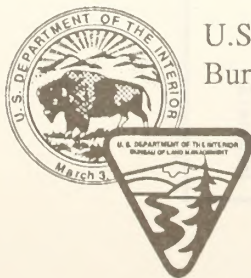
BUREAU OF LAND MANAGEMENT



Public Land In The Western States



Legend
Lands Managed By BLM



U.S. Department of the Interior
Bureau of Land Management

BUREAU OF LAND MANAGEMENT STATE OFFICES

ALASKA: 222 W. 7th Avenue, #13
Anchorage, AK 99513-7599
Vacant, State Director
(907) 271-5555

MONTANA: 222 N. 32nd Street
P.O. Box 36800
Billings, MT 59107
Marvin LeNoue, State Director
(406) 255-2913

ARIZONA: 3707 N. 7th Street
P.O. Box 16563
Phoenix, AZ 85011
Vacant, State Director
(602) 241-5504

NEVADA: 850 Harvard Way
P.O. Box 12000
Reno, NV 89520
Ed Spang, State Director
(702) 328-6386

BIFC: Boise Interagency Fire Center
3905 Vista Avenue
Boise, ID 83705
Jack Wilson, Director
(208) 389-2457

NEW MEXICO: 120 Post Office and Federal Bldg.
P.O. Box 1449
Santa Fe, NM 87504-1449
Larry Woodward, State Director
(505) 988-6316

CALIFORNIA: 2800 Cottage Way, E-2841
Sacramento, CA 95825
Ed Hastey, State Director
(916) 978-4746

OREGON: 825 NE Multnomah Street
P.O. Box 2965
Portland, OR 97208
Dean Bibbes, State Director
(503) 231-6274

COLORADO: 2850 Youngfield Street
Lakewood, CO 80215
Vacant, State Director
(303) 236-1700

PTC: Phoenix Training Center
5050 N. 19th Avenue
Suite 300
Phoenix, AZ 85015
Larry Hamilton, Director
(602) 241-2651/FTS 261-2651

EASTERN STATES: 350 S. Pickett Street
Alexandria, VA 22304
Curtis Jones, State Director
(703) 461-1369

UTAH: 324 South State Street
CFS Finan. Ctr. Bldg., Suite 301
Salt Lake City, UT 84111-2303
James M. Parker, State Director
(801) 539-4021

IDAHO: 3380 Americana Terrace
Boise, ID 83706
Del Vail, State Director
(208) 334-1771

WYOMING: 2515 Warren Avenue
P.O. Box 1828
Cheyenne, WY 82003
Ray Brubaker, State Director
(307) 772-2111

TAKE
PRIDE IN
AMERICA

